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Splanchnic Anesthesia

CHARLES H. ARNOLD, M. D.
and
L. V. GIBSON, M. D.
Lincoln, Nebraska

IT has been well stated that "The subject of surgery is as old as human needs." In like manner the demand for and development of anesthesia is historical.

It is not my purpose to go into the history of anesthesia and analgesia but rather to call attention to the fact that a constant search has been made and is still being made for the ideal anesthetic. An ideal anesthetic should be one which, of course, does not contribute to mortality. In the second place, it should not contribute to morbidity, and in the third place it should render the operative field as nearly perfect, as possible, for the surgeon.

We are all familiar with the factors which produce death from anesthesia; the cardiac, pulmonary and renal complications stand out most prominently. But one big factor is frequently overlooked, namely: the loss of body fluid through vomitus and perspiration and the resulting dread complication of paralytic ileus.

Increased morbidity is frequently brought about by the use of improper anesthetics. For instance, the development of pneumonia, even though it may not be fatal, keeps the patient in the hospital an unusual length of time and leaves him in a convalescent state for many weeks longer than he would have been, had he not suffered from this complication. The nausea and vomiting frequently produce a weakened abdominal wall, if not a complete evisceration.

The ability of the surgeon to do good work on account of lack of relaxation under many of the general anesthetics in upper abdominal work contributes to morbidity in the form of post operative adhesions due to imperfect closure of the abdominal incision and to the rough handling of abdominal contents made necessary by the walling off with enormous sponges in order to give the surgeon a clear operative field.

These are some of the factors that doubtless inspired the men of the generation preceding us, after the discovery of novocaine, to devise some method which would eliminate some of the distressing complications with which they were being constantly confronted.

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It is becoming more and more generally conceded by open-minded surgeons everywhere that a nerve block anesthetic or analgesic is the ideal agent to use, provided that this can be used safely and with comfort to the patient.

In all operations below the umbilicus, the spinal anesthetic is the ideal procedure, but when one goes above that line in patients over sixty years of age, he faces problems that are not to be found below the umbilicus or in younger patients above the umbilicus.

SPLANCHNIC ANESTHESIA

Splanchnic anesthesia was first introduced by Kappis, Pauchet and Broun, and to them we are deeply obligated. However, the popularizing of the procedure has been accomplished by Professor Hans Finsterer of Vienna, who uses it consistently in all upper abdominal operations. He is most enthusiastic about it and has no patience with, or charity for those who would condemn it.

A surgeon needs only to attend Professor Finsterer's clinic to become impressed with this method, and if one follows his work for a few months and studies his statistics, one is impressed with the honesty of his assertions and the value of the procedure.

The main objection to the use of the splanchnic anesthesia, as nearly as I can learn, has been that it is difficult and tiring to both the surgeon and the patient, but after one has used it a few dozen times, it becomes a fairly simple procedure.

Kappis, early in his work, advocated the posterior method. As this is a blind injection, it leads to so many failures and is accompanied by so many dangers, that in my opinion, the transperitoneal method is decidedly preferable. This method simply means the infiltration of the abdominal wall for the incision and then the careful infiltration and blocking back of the parietal peritoneal wall, after the abdomen is opened. This, then is followed with an injection of the gastro hepatic ligament or lesser omentum, with a small amount of novocaine with a fine needle, and the stomach is gently pulled downward with the patient in a semi-sitting posture, reclined to an angle of about forty-five degrees and with the assistant holding the stomach down with a flat retractor and the liver up with

another flat retractor, pressure is made with the index finger of the left hand over the region of the celiac axis and anterior surface of the first or second lumbar vertebra where the abdominal aorta is felt pulsating and is gently pushed over to the left. The finger is then pressed down on the surface of the vertebra.

The point of injection having been well determined by the index finger of the left hand, a long splanchnic needle with a short bevel is grasped with the right hand and is slid down along the index finger, using it as a guide, and it is inserted through the gastro hepatic ligament, or lesser omentum, on through the posterior peritoneum until the point of the needle rests on the anterior surface of the vertebra between the abdominal aorta and the vena cava and in the region of the celiac plexus.

When one finds that the needle is resting firmly on the vertebra, the guiding finger and hand are withdrawn, and from 75 to 100 c.c. of one half of one per cent novocaine solution, containing the usual amount of adrenalin, is introduced, which immediately floods the retroperitoneal space and within three to five minutes, produces complete anestehesia of all the upper abdominal viscera, including the stomach, pancreas, liver bile ducts, transverse colon and spleen and sometimes the entire intestinal tract.

If the needle punctures a blood vessel, as evidenced by the presence of blood in the needle, it must be withdrawn and re-inserted before making the injection. Finsterer warns against injecting at all under such circumstances, but I have done so in at least five cases and there have been no ill results.

The only pain that the patient suffers during the entire procedure is at the moment that the guiding finger passes down firmly upon the lesser omentum, and this can be obviated by infiltrating this area with novocaine before introducing the finger as heretofore described. There are no untoward symptoms. The patient does not complain of any discomfort, shortness of breath, feeling of weakness, etc., which are commonly complained of in spinal anesthesia.

The anesthetic lasts for three hours but if one prolongs his activity that long, it will probably be necessary to re-anesthetize the abdominal wall when ready to suture it.

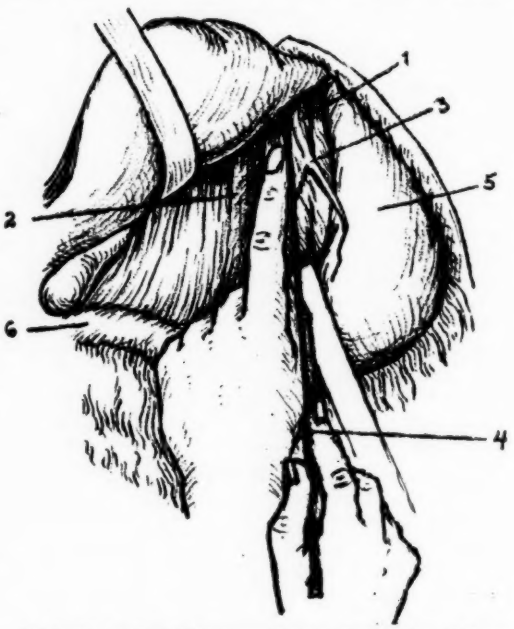
With this upper abdominal area anesthetized it is possible to do any type of surgery necessary, namely: gastric resection, cholecystectomy, bile duct surgery, pancreatic surgery, or any surgery upon the transverse colon or spleen.

The convalescence following the use of the splanchnic anesthesia is so different from that of other anesthetics where extensive upper abdominal surgery has been done, that it is indeed striking.

Complications are conspicuous through their absence. The patient remains comfortable and does not require the sedatives ordinarily used. There is no nausea or vomiting, consequently there is no loss of body fluid. The eliminators of the skin are not disturbed, there is no shock, there are no pulmonary complications; in fact, it comes near being the ideal anesthetic.

Its use is particularly adaptable in debilitated individuals, where upper abdominal surgery is necessary and where no other anesthetic can be tolerated.

I would not recommend, however, the use of it only when no other anesthetic can be used, because, like every other agent that we possess, if we will be proficient in its use, it will be necessary for us to use it freqeuntly, and in cases that would probably get along without very much discomfort regardless of the type of anesthetic used. In other words, if one will be proficient in the use of splanchnic anesthesia, he must use it frequently and master the technique.



Anterior splanchnic ænesthesia. Left lobe of liver retracted upwards, stomach drawn down, through which the small omentum is stretched. 1, æorta; 2, vena cava; 3, cæliac axis; 4, Finsterer Splanchnic needle; 5, stomach; 6, duodenum.

In my comparatively small series of slightly over one hundred cases of splanchnic anesthesia, without any anesthetic death or a complication, I am so convinced of the virtue of it and its life-saving quality, that I am a true missionary for it and I am firmly convinced that many patients' lives can be saved that would be lost by the use of any other anesthetic.

ANATOMY

The great splanchnic nerve is formed by branches from the sixth, seventh, eighth and ninth thoracic ganglia of the sympathetic trunk. It is about as thick as a match and runs down on the two sides

of the vertebral column, passing through the diaphragm between the medial and intermedial crura on the right side with the azygos vein, and on the left with the hemi azygos vein. The nerve enters the abdomen at the height of the twelfth rib. After a short course it bends at an approximate right angle toward the midline, joins the upper end of the celiac plexus. The lesser splanchnic nerve originates by two branches from the tenth and eleventh thoracic ganglia. Its course is similar to that of the greater splanchnic but on a somewhat more dorsal plane. The two semi-lunar ganglia form the nucleus celiac plexus, the left situated to the left of the celiac axis and right between the vena cava and the left lobe of the liver and the head of the pancreas. The whole plexus forms a ring around the celiac axis. Each semi-lunar receives at its upper pole the greater splanchnic nerve, and at the lower border lying over the renal artery, the lesser splanchnic nerve enters.

The rami communicantes from the lumbar sympathetic trunk may enter the celiac but usually joins the aortic plexus. This whole network of semilunar ganglia, splanchnic nerves and rami communicantes, with the abdominal branches of both vagi, form the celiac plexus. It is therefore seen to be formed from both sympathetic and parisympathetic fibres. It has been shown that the vagi contain no fibres carrying pain sensation. It is known that the sympathetics do carry pain fibres. Whether the sensory fibres of the sympathetic system belong to the sympathetic system or are only carried in them has not been determined. The practical conclusion, however, is the same. The splanchnic nerves carry sensory fibers for a large group of abdominal organs and their block results in analgesia. It is not necessary here to go into the theories regarding pain in the abdominal viscera. It may be noted, however, that the most sensitive points are the mesentary, the lesser omentum, the gastric attachment of the greater omentum, the region of the cystic, hepatic and common ducts, the porta hepatis, the renal hylus and the larger vessels. Clinically, it is to be noted that splanchnic block results in perfect analgesia of the upper abdomen including the liver, spleen, stomach, duodenum, pancreas and transverse colon.

SUMMARY:

The splanchnic nerves carry sensory fibres for a large group of abdominal organs and their block results in analgesia. The most sensitive points in the abdominal viscera are the mesentery, the lesser omentum, the gastric attachment of the great omentum, the region of the cystic, hepatic and common ducts, the porta hepatis, the renal hylus, and the larger vessels.

Clinically, it is to be noted that splanchnic block results in perfect analgesia of the upper abdomen, including the liver, spleen, stomach, duodenum, pancreas and transverse colon.

The transperitoneal method is preferred by the author and the technic is described. There is no shortness of breath, no feeling of weakness, or other discomfort commonly complained of in spinal anesthesia. The anesthetic lasts for three hours; it may be necessary to re-anesthetize the abdominal wall before suturing.

Complications do not arise. The patient remains comfortable. No sedatives are required. There is no nausea or vomiting, no loss of body fluids, no pulmonary complications. The eliminators of the skin are not disturbed. Its use is particularly adaptable in debilitated individuals, where upper abdominal surgery is necessary and no other anesthesia can be tolerated.

The author recommends its more frequent use. In a series of 100 operations, there was no anesthetic death or complication.

903 Terminal Bldg.

Brachial Block Anesthesia

CHARLES H. ARNOLD, M. D.
and
L. V. GIBSON, M. D.
Lincoln, Nebraska

BRACHIAL anesthesia is one of the most valuable agents we have at our command at the present time, and yet one of those agents which is most rarely used. It is particularly adaptable for either either office or hospital practice, and where no anesthetist is available and one must work single handed on an upper extremity it is indeed a most valuable agent.

The technique of brachial block anesthesia, like any other techninque, is extremely simple, after one has carried out the procedure a dozen times or more, and is not to be feared by the careful operator.

The technique which we have found to be acceptable and satisfying is the supra clavicular route. With the patient in a sitting or semi-sitting posture, bisect the clavicle after raising a small weal in the skin, a fine needle slightly larger than a hypodermic needle is then inserted at right angles with the clavicle and in the direction of the 7th cervical transverse process until the point of the needle meets with the plexus or until it rest on the outer surface of the first rib.

When the needle comes in contact with the plexus

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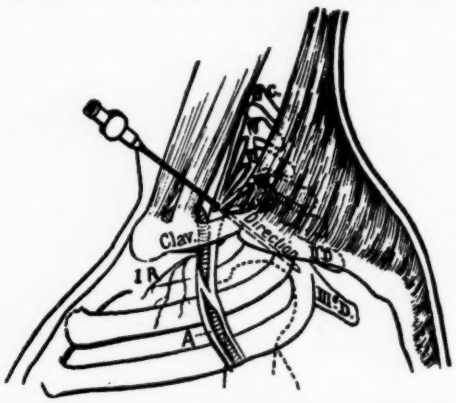
the patient will give the warning, having been instructed beforehand to signal when he feels an electric like shock proceeding down the arm to the finger. When this is accomplished, 30 to 40 c.c. of



Illustrating general direction of needle; it should never pass beyond the first rib.

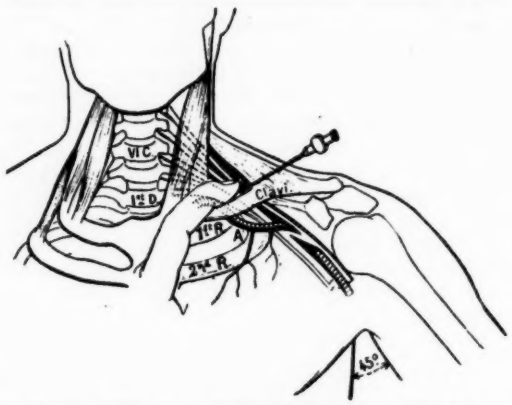
2% novocaine is injected, being very careful not to change the position of the needle in the slightest degree. Within a few moments the patient begins to notice anesthesia in the arm. In twenty minutes the entire arm is anesthetized.

The sensory nerves are most easily affected by this block, the same as in any other novocaine block; the motor nerves also are usually paralyzed.

The anesthesia produced by this method enables one to do anything surgically from the shoulder girdle to the tips of the fingers and is a most helpful anesthetic to use in hand injuries where a considerable length of time is consumed to repair tendons, nerves, etc. The anesthetic will last from two to three hours.

Two points in the administration of this anesthetic are to be considered carefully and seriously.

One must be sure that the needle does not rest within lumen of a large vessel. This, of course, can be easily determined by drawing the plunger of the syringe. The second precautionary measure to be



Showing needle on upper border of mid portion of clavicle with point entering brachial plexus on top of first rib (needle must never pass beyond first rib.)

used is never to pass the needle beyond the first rib, for by so doing one may injure the pleura, or cause lung collapse or pleural shock.

Terminal Bldg.

Artificial Pneumothorax

DERMONT WILSON MELICK, M. D.
Madison, Wisconsin

INTRODUCTION

THE year 1939 has been ushered in with one remarkable promise. Pneumonia will never be known hereafter as "Captain of the Men of Death." Sulfapyridine, the recently introduced drug closely related to sulfanilamide, is responsible for this modern medical miracle.

If we are to conquer tuberculosis as pneumonia has been conquered, it is high time we gave it our undivided attention. Some there are who will point with pride to our present tuberculosis mortality statistics. They would have us believe that tuberculosis is slowly but surely being eradicated from these United States. Nothing could be further from the truth. The statistics fail to state that among the youth of our nation tuberculosis is rampant. Its ravages are concentrated on the very backbone of our nation. It is the leading cause of death between the ages of fifteen and forty-five. The mortality rate must be reduced in this age group if our statistics are to have any tangible meaning. Suffice it to say that tuberculosis is the greatest public health problem of our time.

If one were to believe the majority of published statistics Arizona would be forever condemned as a hotbed for the breeding and dissemination of the tubercle bacillus. This again is contrary to the actual facts. Arizona can and does offer the best chance for the complete cure of tuberculosis. We offer the ideal environment and necessary medical facilities, and therefore should continue indefinitely as a mecca for the tuberculous individual. Let those who would refute these statements do so not with such notorious misrepresentations as are couched in statistics.

Arizona has, however, a goodly number of tuberculous individuals who want for more efficient care of their disease. This could be said of any state. To remedy this, Arizona is one of fourteen states now boasting a state organization devoted entirely to

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the adequate control of tuberculosis. All of us should be aware of this organization and the plan it proposes. This paper is but one attempt to bring the plan forcibly to mind. We must emphasize and re-emphasize the necessity for a widespread and concentrated effort by all physicians within the state if the plan is to be a dynamic and continuous success. If it is less than that we have neglected our duty and left the purpose unfulfilled.

One of the aspects in this efficient care is the individual suitable for pneumothorax therapy who may be ambulatory. To this we will assign the term "ambulatory pneumothorax" and provide a concise definition in due time.

COLLAPSE THERAPY IN GENERAL

Before launching in to the main theme I think it well to say a word about collapse therapy in general. This will enable us to establish a base line and also aid in emphasizing the fact that the approach to the problem of tuberculosis control must be considered in all its ramifications if we are to reach the ultimate in thorough-going control of this disease.

When one excludes pneumothorax and thoracoplasty much of what might be said regarding collapse therapy has been denied us. It must be realized that collapse therapy includes a great deal more than is covered by these two operations. In addition to pneumothorax and thoracoplasty there are nine other operations now at our command to bring about collapse of the lung. From this total of eleven different operations we must choose the most suitable one for the particular case at hand. These eleven operations are enumerated as follows:

1. Phrenic paralysis
2. Scaleniotomy
3. Pneumothorax
4. Intra-pleural pneumonolysis
5. Oleothorax
6. Multiple intercostal nerve paralyses
7. Extra-pleural pneumonolysis (to include extra-pleural pneumothorax)
8. Supra-periosteal pneumonolysis
9. Extra-pleural thoracoplasty
10. Cavity drainage
11. Pneumo-peritoneum

EXTRA-PLEURAL PNEUMOTHORAX

With two exceptions nothing further will be said regarding each individual operation. These two exceptions are the intra-pleural ambulatory pneumothorax, to which this paper is primarily directed, and the extra-pleural pneumothorax. Special note is to be given to the extra-pleural pneumothorax in order to clearly differentiate it from the intra-pleural pneumothorax.

To be all inclusive it might be defined as an extra-pleural, extra-fascial apicolysis followed by the introduction of air over the collapsed apex of the lung. This apicolysis is accomplished by removing a portion of the 3rd or 4th rib posteriorly keeping all dissection outside the endothoracic fascia with especial emphasis on careful freeing of Sibelau's bands above Sibson's fascia at the apex. This allows the apex to be shelled out and collapsed downward. This collapse is afterward maintained by repeated refills with air. This procedure finds favor where intrapleural pneumothorax is impossible and thoracoplasty undesirable. It has strict limitations and in view of its recent introduction its value is yet to be definitely established.

AMBULATORY PNEUMOTHORAX

We come now to the main interest of this paper, that is, intra-pleural ambulatory pneumothorax. This completely excludes any reference intentional or otherwise to the aforementioned extra-pleural pneumothorax. To define what is meant by the term "ambulatory pneumothorax" is most important. It does not offer a cure for tuberculosis "on the run" so to speak. It does not exclude a period of hospitalization. It is not unattended by complications and is not a simple procedure when considered in its totality. It must be applied by intelligent and discerning physicians. Precisely, the definition is as follows: "a short period of hospitalization of two to four weeks in a local hospital during which time collapse of the diseased lung is established, followed by regular visits to the outpatient pneumothorax clinic for refills, the patient remaining at home in bed, under supervision during the interim." If one could positively guarantee to a patient presenting an early lesion full return to work within the space of a few short weeks on the above regimen then it is but a short way from there to Utopia. Of course no guarantee like this is possible or even remotely suggested. It is of interest, however, to note that cases have been reported with early return to work. The following instance is reported by Dr. J. W. Cutler of Philadelphia:

A dentist was stricken with active tuberculosis of the lungs just as he was becoming established in practice. Examination revealed a cavity 3 centimeters in diameter in the upper lobe of the right lung. He had a positive sputum, cough and an evening temperature of 99.4 degree Fahrenheit. Initial pneumothorax was instituted on June twelfth, 1933. The collapse was satisfactory; the cavity closed, the sputum became negative and the fever disappeared. Two weeks later (June 26, 1933) he was in his office again practicing dentistry. At the present writing, six years later (March, 1939) he presents no evidence of active disease.

The foregoing case is remarkable but not unusual.

INDICATION AND APPLICABILITY

The indication and applicability of ambulatory pneumothorax is to those cases classified as the "curable type". This excludes those having far advanced bilateral disease and preferably includes only those presenting an early lesion and more specifically of unilateral involvement. Thus is the field for ambulatory pneumothorax limited. And as surely as the limitations are disregarded then just as surely are there to be recorded results that will be poor if not disastrous. It is worthy of emphasis that in almost every instance where the disease is limited to one lung and successful collapse can be obtained the sputum will become free of tubercle bacilli, in some cases within a few weeks after the

institution of treatment. From the view-point of public health, this result is of the greatest importance. If by such a relatively simple procedure as pneumothorax a goodly number of tuberculous patients can be rendered harmless to those about them through the disappearance of tubercle bacilli from the sputum we have in this procedure one of our most powerful weapons in the control of tuberculosis. As to the best time for the introduction of the initial pneumothorax no set rules can be laid down. When an individual is diagnosed as having clinically active tuberculosis with positive sputum, some sort of collapse therapy should be established as soon as practicable. In the average case there is nothing to be gained by waiting a few months to see how the patient will respond to bed rest alone.

I recently had the opportunity to hear a well qualified radiologist make the statement that collapse therapy is never indicated until cavitation has occurred. Surely experienced phthisiologists will not concurr in this opinion. It seems inevitable that small cavities will form and still not be demonstrable on the X-ray plate. This inexcusable delay also allows for the formation of adhesions which might otherwise have been avoided. Needless to say a progressive lesion demands collapse therapy before the stage of cavitation if one is fortunate in reaching the patient at this early stage.

As to the applicability of ambulatory pneumothorax it can be stated roughly that one-fourth of the cases of active pulmonary tuberculosis are suitable for this treatment. Troublesome adhesions prevent adequate collapse in a good many additional cases. There are possibly 800,000 cases of active pulmonary tuberculosis in the United States today. 200,000 of these cases are amenable to ambulatory pneumothorax. 700 of these cases are within the confines of the state of Arizona. Today, in New York City there are 1700 individuals being treated in the pneumothorax clinics scattered throughout the different sections of that city.

THE PENUMOTHORAX CLINIC

Our main interest must be confined to the 700 individuals for whom we must be responsible. A case plan management must be outlined for these tuberculous individuals. An integral part of the case management is the establishment of pneumothorax clinics. There should be designated throughout the state, and this has been done, certain cities wherein a pneumothorax clinic is to be organized.

Each clinic, and to this there is no warranted exception, should be harbored in a hospital. Whether it be a small private hospital or a large general hospital makes no difference, but the clinic must be in close relationship to some hospital. This is necessary in order to provide available beds and also to take care of the complications that are certain to arise under this therapy be they minor or major in character. The incorporation of the hospital as a part of the clinic is essential but unfortunately presents us with a stumbling block. The greatest difficulty will be in getting the hospitals to assign beds in their wards for the hospitalization of active cases as they all have a tendency to shy away from the care of tuberculosis.

In addition to the physical equipment such as a pneumothorax machine and an X-ray, it is important that the physician in charge be well versed in the administration of pneumothorax and have an appreciation of the value of fluoroscopy. It is well to have each clinic supervised by a thoracic surgeon but this is impossible in most instances. Along the line of supervision it is well to call attention to the limitations of this clinic. Most certainly the work will not be limited to pneumothorax alone. Limitations are as follows: operations must be confined to pneumothorax, oleothorax, pneumo-peritoneum and phrenic paralysis. With the possible exception of these relatively simple procedures all other surgical measures should be referred to a thoracic surgeon. An especial word of warning is issued as regards intra-pleural pneumonolysis. The intra-pleural freeing of adhesions is not a difficult operation, and this is especially true since the improvement of the Cutler single cannula thoracotome. However, this does not supplant the necessity for experience nor allow for the success of the occasional operator. The temptation to do intra-pleural pneumonolysis lies in the fact that many patients have adhesions amenable to such surgery. The cutting of these adhesions will result, in many instances, in a more effectual collapse, but it is for the experienced thoracic surgeon to aid in bringing this about, and not the ambitious neophyte!

One final essential is necessary in the make-up of the clinic. This essential is a nurse, probably one engaged in public health nursing, or as a second choice, a competent social service worker. This individual is indispensable in that the patient on ambulatory pneumothorax must be instructed as to his or her conduct after release from the hospital. It is the duty of the nurse to visit the patient and see that all instructions are carried out. Her job is an important one and the success or failure of the plan may hinge on her diligence.

One more word might be added with advantage when considering the location of these different clinics. The cities scattered throughout the state of Arizona are located at various altitudes. Doctor John Alexander states that an individual carrying a pneumothorax of one thousand cubic centimeters at sea level will have an increase in the volume of that air up to 1400 cubic centimeters when transported to an altitude of ten thousand feet. This is of little importance as a rule, but the difference in altitude between Southern and Northern Arizona should be taken into consideration if the patient is to travel from the low to the high altitude.

SUMMARY OF CASE MANAGEMENT PLAN

The treatment for the individual case may be summarized as follows: Each hospital so designated as a pneumothorax clinic should be required to provide one or more beds for the care of the "ambula-

tory patient". Each patient considered suitable for ambulatory treatment is to use one of these beds from two to four weeks while the initial pneumothorax is being instituted. Following this and with definite evidence of satisfactory progress the patient is discharged to his home. Here the most important part of the therapy is to be carried out by the patient under the guidance of the nurse. He should report at stated intervals to the pneumothorax clinic for fluoroscopic examinations and refills. His progress is checked, and if and when it can be decided his disease is under control he is gradually returned to his previous occupation. The criteria for return to work are: negative sputum, all cavities completely collapsed, no constitutional signs of active disease, good exercise tolerance and a normal sedimentation rate. It is at this point that our patient becomes completely ambulatory in the full meaning of the word. For three years thereafter his pneumothorax is maintained. The length of time for maintaining the pneumothorax is arbitrary but an early release of the pneumothorax is to be guarded against. Remember that the decision to discontinue pneumothorax and allow the lung to re-expand is usually irrevocable once such a decision is carried out.

CONCLUSION

Experience has proved that ambulatory pneumothorax answers the three essentials for any treatment regimen prescribed for tuberculosis. Toxemia and spread of the disease is checked. Positive sputum is converted to negative sputum. The patient is restored to working capacity.

In addition to the fulfillment of these three essentials ambulatory pneumothorax also has definite economic and health aspects. Ambulatory pneumothorax would result in the immediate care of more than 200,000 patients throughout the United States. In Arizona alone it would be possible to treat 700 patients by this most scientific and economic means.

It is quite evident that with a coordinated plan and with the proper personnel we could accommodate the large majority of tuberculous individuals now clamoring for admission to our sanatoria without further delay. We should be able to place them under treatment as soon as diagnosed in either a local hospital or sanatorium. Every patient treated successfully in a local hospital makes available a bed in a sanatorium which he would have eventually occupied under our present system. Even were such a coordinated plan in full force today, sanatoria would still have long waiting lists. There are now five patients waiting to fill each available sanatorium bed. Arizona must in some way cope with this need. It is obvious that additional sanatoria are necessary and of primary importance, but this problem cannot be discussed here. Suffice it to conclude that the organization of pneumothorax clinics and the construction of new sanatoria offer the only full and complete solution to the problem.

SUMMARY

1. In spite of published statistics Arizona in actuality is the ideal place for the treatment of pulmonary tuberculosis.

2. Twenty-five per cent of the tuberculous population having active pulmonary tuberculosis can be treated by ambulatory pneumothorax, by which is meant a short period of hospitalization of two to four weeks in a local hospital during which time the collapse of the diseased lung is established, followed by regular visits to the out-patient pneumothorax clinic for refills, the patient remaining at home in bed, under supervision, during the interim.

3. Ambulatory pneumothorax is preferably limited to the individual presenting the early lesion This is the patient whose disease is unilateral and in whom there is a reasonable chance for success without undue risk.

4. Pneumothorax clinics should be established in conjunction with a local hospital. Each hospital should afford two or more beds for tuberculous patients. An experienced physician versed in the administration of pneumothorax should be in charge of the clinic. A nurse should be included as an integral part of the clinic. Her duty it would be to carry out follow-up and education of each patient under treatment.

5. Sanatorium beds should be reserved for the more seriously ill who would not do well under ambulatory pneumothorax treatment or for whom such treatment is not suitable. We should attempt to place all tuberculous patients under treatment in either a local hospital or sanatorium as soon as the diagnosis is made. The economic and social value of the plan is self evident.

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DISCUSSION

DR. SMITH: Thank you, Dr. Phillips. For the benefit of those who came in late, Dr. Phillips read a paper by Dr. Melick, who was unable to be here. The paper is now open for discussion.

DR. HOLMES: I am interested in pneumothorax, especially of this type. This plan necessitates the expenditure of a good deal of money in itself and is not particularly an economical scheme. It costs a little over $4.50 a day in the hospital, and that would be $150.00 for each case. That number given by Dr. Melick who are entitled to treatment in Arizona must be very low. I have 110 cases myself.

DR. PHILLIPS: There are at least 700 now under collapse. He means cases treated at the public expense.

DR. HOLMES: I would say that not more than 10% of my collapse cases have ever been in a hospital. It would seem that a hospital charge of $150 would be a very considerable amount for most of them because they are not able to pay more than $3.00 a pneumothorax treatment. My experience has been that many of these patients for care have little. There is only one emergency which cannot be handled, from which you can't worm out of, and that is spontaneous pneumothorax. We have adopted one system, and we have a great many of these cases in homes. We put them in the car and race to the hospital, but ordinary complications can be taken care of by removing them to the hospital. I am speaking of people who do not have the money. I would only say, in commenting on this paper, that I believe very firmly in pneumothorax but I would say that I think it is not at all necessary to hospitalize these patients. I base that on experience of many thousands of cases where we have not done that. In mentioning one of the criteria, an arbitrary rule of three years is given. I heard a talk in which they varied from one to five years, so I am sure that would be a very arbitrary rule. I had the weather man figure out the change in altitude between here and Prescott, and that would be 170 c.c. per 1000 c.c. in the patient.

DR. SMITH: Any further discussion? Do you have any closing remarks, Dr. Phillips?

DR. PHILLIPS: I would like to thank Dr. Holmes on behalf of Dr. Melick. He put in that business of the sedimentation tests as the least important of all his criteria. It often lags behind any other signs of improvement. We have been trying, that is the Board of Tuberculosis Control, to institute something of this general sort up at the State Welfare Sanatorium, not only to get the turnover, but to get the patients back into their communities. If this could be provided, it would be very desirable.

Differentiation of Parietal and Intra-Abdominal Pain

ZENAS B. NOON, M. D.
Nogales, Arizona

ALL abdominal pain and tenderness is not due to intra-abdominal disease. Pain and tenderness of the parietal wall is a frequent and common cause of abdominal pain and tenderness. J. B. Carnett*[1] refers to parietal pain and tenderness as intercostal neuralgia or parietal neuralgia. This term is used to indicate a symptom complex, and not a separate disease, the cause of which may be due to various conditions as upper respiratory infections, toxemia, poor posture, trauma of spine, arthritis of the spine, various spinal cord lesions and any combination of two or more of these factors. This symptom complex may be manifest in any part of the body, however, in this paper the discussion is limited to the abdomen.

INTERCOSTAL OR PARIETAL NEURALGIA

Intercostal neuralgia may be acute or chronic, transient or persistant. The severity of the pain is variable. The type of pain or symptoms of intercostal neuralgia are varied. Carnett[2] has grouped them into four groups according to the severity of the symptoms, i.e., Group I. Severest form (which is relatively rare) may be manifest by colic or strangulation pain. These pains have been described as tearing apart, tearing of flesh, stabbing, grinding—vice like, distention, unable to breathe. Group II. Less agonizing than Group I—pain may be shooting, knife like, stabbing, colicky, cramp like, pounding. Group III. Milder form—patients complain of pains as drawing, pulling, dragging, throbbing, pressing, aching, sickening, bloated, cutting. Group IV. Mildest form. In this form the complaint is an ache, soreness, burning, pins and needles.

The entire nerve supply of the lateral and anterior abdominal wall comes from the lower seven intercostal nerves and the first lumbar nerve. (2) The pain and tenderness of parietal neuralgia may effect any part of the abdomen depending on the particular nerves involved. It may be generalized, localized, unilateral or bilateral. The predominance of neuralgia is in the tenth, eleventh, twelfth intercostal nerves, and the first lumbar nerve. (3) "As a rule irritative lesions affect only the sensory fibers, but in very exceptional instances the motor fibers are also affected and then muscular rigidity will be encountered along with abdominal pain and tenderness."

Abdominal intercostal neuralgia may simulate any intra-abdominal affection which has pain and tenderness among its outstanding symptoms, depending upon the nerve or nerves involved. It may simulate gastric ulcer, gall bladder disease, appendicitis, kidney lesions, tubo-ovarian disease, etc. This simulation of visceral disease may present itself in acute, subacute or chronic form, depending upon the severity of the parietal neuralgia. It can be safely said that it is an imitator of intra-abdominal disease.

Parietal neuralgia may co-exist with an acute

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intra-abdominal lesion. (4) "Except for acute pelvic infection it is comparatively rare for an acute attack of parietal neuralgia to co-exist with any acute intra-abdominal lesion. The most common associated acute lesion and yet a very infrequent one is acute appendicitis."

Parietal neuralgia and an intra-abdominal lesion may both be present at the same time, as for instance neuralgia involving the area overlying the gall bladder. There may be present a chronic cholecystitis with stones which is causing symptoms at the same time there may be present intercostal neuralgia giving rise to pain and tenderness of the parietes overlying the gall bladder area. The parietal pain will not as a rule be relieved by cholecystectomy, but will persist after the operation. The percentage of failures of cures for pain in so-called chronic appendicitis, as we all know, is quite high, ranging from 10% to 40%[4] (Bettman). This failure is probably due to the presence of intercostal neuralgia which was overlooked.

Because parietal neuralgia is present does in no way exclude the possibility of a co-existing intra-abdominal lesion. The diagnosis of an intra-abdominal lesion is often more difficult in the presence of an overlying intercostal neuralgia.

It has been the experience of Carnett[3] that intra-abdominal lesions of any kind rarely give rise in themselves to parietal pain; this has also been my experience during my observation of the past six years. Errors in diagnosis can easily occur if the abdominal parietes are not thought of as a possible location of abdominal pain. If the parietes are not considered as a possibility the symptoms are likely to be wrongly attributed to a lesion of an intra-abdominal viscus underlying the localized area of greatest pain and tenderness.

We have all had cases of abdominal pain that have been operated for what we thought was a chronic appendix. Temporarily following the operation the pain and tenderneess for which the patient was operated has been relieved. Then the patient has returned complaining of the same pain as before operation. The patient has again been operated for adhesions or for something else intra-abdominal which was thought to be causing the pain, and again without relief of pain. These patients have drifted from one doctor to the other and had several operations without relief of pain. We are all familiar with this class of patient. In many of these cases parietal neuralgia has been overlooked as the cause of the abdominal pain and tenderness.

Carnett[1] in his original paper on "Intercostal Neuralgia as a Cause of Abdominal Pain and Tenderness" described what he called the A and B test for differentiation of parietal and intra-abdominal pain and tenderness. It is this test I would like to call to your attention as a means of making the differential diagnosis between intra-abdominal and parietal pain. Since his original description novocain injection of the intercostal nerves has been used to disassociate the two types of pain, i.e., parietal and intra-abdominal.

"A & B" TESTS

Test A. The abdomen is examined in the usual way with relaxed muscles, palpation is carried out in the usual way. The fingers will press rather deeply into the abdomen or they may be stopped by true or voluntary rigidity. This part of the examination will elicit tenderness of all three sensory layers of the abdominal wall, i.e., skin, muscles, peritoneum, and intra-abdominal pain and tenderness.

Test B. This consists of two parts. 1. Test for skin and fat tenderness. This test is carried out by picking up a liberal fold of the skin and fat between the thumb and index finger and pinching these structures between the fingers. (It is usual that at first one is afraid to pinch vigorously enough.) The result will be no pain to acute pain. I have personally graded the type of reaction from no reaction to four plus. This has given me a yardstick by which to record the mildness or severity of the tenderness.

2. Test for muscular tenderness. This can be carried out in one of two ways. The patient is asked to balloon out the abdomen and hold the muscles very tense. The abdomen is then palpated with the fingers. The palpation should be vigorous. The other method is to have the patient raise the head which in itself tenses the muscles and then have the patient further tense them voluntarily. Examination is then carried out as already described. Here again the pain and tenderness is graded from no reaction to four plus. Any pain and tenderness elicited is located in the skin, fat, and muscles, and is not intra-abdominal. No peritoneal tenderness is elicited (1) "because thoroughly tense muscles protect the underlying sensitive peritoneum from painful pressure." This can be demonstrated very easily in gangrenous or perforated appendicitis, with the muscles properly tensed, most drastic pressure can be made without causing pain, the following two cases illustrate this point:

CASE REPORTS

J. S., negro, male, age 34 (1938), seen in consultation with Dr. J. S. Gonzales, complained of abdominal symptoms suggestive of food poisoning with pain in right lower abdomen. Examination—Temperature 101. In the right lower abdomen there was acute pain and tenderness, some rebound tenderness, a positive Brittain's sign. The tests for intercostal neuralgia were negative. When the patient ballooned out the abdomen and made it tense the most vigorous poking and pressure elicited no pain or tenderness. However, as soon as the muscles were relaxed and the abdomen again palpated there was acute pain and tenderness. Operative diagnosis—gangrenous appendicitis.

The following case is one of perforated gangrenous appendicitis: B. C., age 10 (1938). This patient was also seen in consultation with Dr. J. S. Gonzales. A small acutely tender mass the size of a hen's egg was found in the right lower abdomen. There was no intercostal neuralgia to tests B-1 or B-2. When the abdomen was ballooned out and the muscles held very tense, no tenderness or pain was elicited on palpation, however, as soon as the abdominal muscles were relaxed and palpation car-

ried out, there was elicited acute pain and tenderness.

It has already been pointed out that parietal pain and visceral pain may both be present at the same time, and that the presence of parietal pain and tenderness in no way excludes the possibility of intra-abdominal pathology. Parietal pain can be eliminated by novocain injection of the nerves. After the elimination of parietal pain any remaining pain and tenderness elicited by the usual routine examination is intra-abdominal.

It has been interesting to observe that in cases of acute appendicitis after the parietes have been anesthetized that the visceral or peritoneal tenderness increases. This is because the overlying protection of the muscles has been abolished. The following case very nicely illustrates this point:

P. K., white, male, age 34 (1934). Patient had chronic right lower abdominal parietal neuralgia due to poor posture, scoliosis. He was taken ill with symptoms suggestive of acute appendicitis. He was ill two days before I saw him. Examination of abdomen—three plus neuralgia to tests B-1 and B-2 in right lower abdomen. There was muscle spasm, rebound tenderness and a positive Brittain's sign. I felt quite sure of intra-abdominal pathology, in spite of neuralgia symptoms, because I had found the neuralgia on a general examination previously. The case was operated, under local anesthesia because of chronic pulmonary tuberculosis. The ilio-inguinal and and ilio-hypogastric nerves were injected with novocain. As soon as anesthesia took effect parietal tenderness was entirely gone. The pain and tenderness elicited by routine abdominal examination was now very much increased, which confirmed the diagnosis of intra-abdominal pathology. The operative findings were gangrenous perforated appendicitis. (The removal of his appendix did not relieve the intercostal pain except temporarily.)

TECHNIC OF INJECTIONS

The novocain injection is simple and without danger when the injections are made at the sites to be indicated later. The nerves to be blocked depend upon the area involved. It is not necessary to inject the nerves directly, for injection about the nerve will give the desired result. Carnett and Bates use 3 c.c. of a two per cent novocain solution. I, personally, have used 5 c.c. of a one per cent solution with satisfactory results. The solution is injected in the immediate vicinity of the affected nerve, the effect of the anesthetic will usually be manifest in five to ten minutes. When the nerve is hit directly anesthesia is almost immediate.

(4) Because of the close relationship of the nerves to the pleura and peritoneum in the early part of their course after exit from the intervertabral foramen, injection here is likely to be dangerous, because of possible injury to the underlying viscera. Between the posterior and anterior axillary lines the nerves lie superficial to the internal intercostal muscle in the chest and anterior to the transversalis in the abdomen. For the seventh, eighth, ninth, tenth and eleventh intercostal nerves Carnett[1] recommends the injection be made just anterior to the posterior axillary line. The subcostal or twelfth intercostal nerve is injected at a point near the free end of the twelfth rib.

When the lower part of the abdomen is in question injection of the ilio-inguinal and ilio-hypogastric nerves is made. This is easily done by making the injection at a point one inch medial to the anterior superior iliac spine on a line with the umbilicus. Carnett points out, it is best to have the patient tense the muscles because it is easier to recognize when the needle passes through the external oblique aponeurosis. The solution is deposited between the external and internal oblique muscles.

USE OF NOVOCAIN BLOCK

The use of the novocain block is a very practical and valuable procedure in proving that the pain and tenderness is purely parietal as is exemplified in the following case.

F. R., Mexican, laborer, age 38 (1938), complained of pain and tenderness over the entire abdomen of three days' duration, with acute pain in the right lower abdomen. He had slight nausea, but no vomiting, the former of about twenty-four hours' duration. Temperature 99, white blood count 14,200 with 82% polymorphonuclears. Abdominal examination revealed tenderness over entire abdomen on routine examination (Test A). To Test B, there was two plus pain and tenderness over entire abdomen with four plus pain and tenderness in the right lower abdomen. (The patient was recovering from an acute upper respiratory infection.)

I felt quite sure this was a toxic parietal neuralgia. It was possible, however, that an acute appendicitis co-existed with the parietal neuralgia. I injected the right ilio-inguinal and ilio-hypogastric nerves with 5 c.c. 1% novocaine. Five minutes later there was no evidence of parietal pain in the right lower abdomen. Routine examination of the right lower abdomen was entirely negative. The rest of the abdomen presented the same picture as on the first examination. Diagnosis—toxic parietal neuralgia.

When we look for parietal pain as a diagnostic possibility it is surprising how frequently it is found. This diagnostic possibility is frequently overlooked with the result that many fruitless intra-abdominal operations are performed when the source of the pain lies outside the abdomen.

With the simple tests described, it is possible to differentiate and disassociate parietal from intra-abdominal pain and tenderness, thereby saving many useless operations.

I, again, want to stress the point that patients who have a parietal neuralgia are not in any sense immune to any form of intra-abdominal lesion. It is important, however, that care be taken to disassociate the parietal symptoms from those indicating a true intra-abdominal lesion.

CONCLUSION

A method has been described for the differentiation and disassociation of parietal neuralgia from intra-abdominal pain and tenderness.

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DISCUSSION

DR. HOGELAND: Dr. Noon's paper is now open for discussion of any questions that might be asked.

DR. BATE: Mr. Speaker, I think that Dr. Noon's paper is very well taken at this time. One of the leading pathologists once remarked: "So long as the abdomen remains poaque, we scarcely know what is inside." Dr. Noon has called attention to the structure and nerve supply of the abdominal wall and has described a method whereby we are able to differentiate intra-abdominal and parietal pain by the use of our fingers and eyes. The simple procedure which Dr. Noon described should form a valuable instrument in the armamentarium of the surgeon who is confronted with the problem of differentiating intra-abdominal from parietal pain.

DR. BANKS: Dr. Noon is to be commended for bringing this subject to the attention of our meeting. Parietal neuralgia is a very important diagnostic entity, and as Dr. Noon said. was pointed out by Dr. Carnett some years ago. I believe I learned more medical diagnosis from Dr. Carnett than I did from any other person. There is no more reason for assuming that a patient has chronic abdominal or intra-abdominal disease than to be assuming that the patient has a headache when he has a scalp ache. Similarly, a patient may have pain in the abdominal wall and not have intra-abdominal disease. There are many ways of making a wrong diagnosis in appendicitis. You may merely poke the abdomen, find tenderness, and decide on chronic appendicitis. The only way to rule out error is in using these tests. The recognition of voluntary body mechanics is very important because the recognition of such a condition will point out the cause of pariatel neuralgia. What is the use of removing the appendix from a young female who has faulty posture and other body mechanics. I feel convinced that no one can appreciate the subject of parietal neuralgia by listening to such a paper, but to study it once it is published, and to apply it to your patients and you will realize how many patients are suffering from intra-parietal.

DR. HOGELAND: If there is no further discussion, will you close the discussion, Dr. Noon?

DR. NOON: I do not believe I have anything to add, except to thank Dr. Patton and Dr. Bank for their discussion. I hope you will all give this test for differentiation of intra-abdominal pain and parietal pain a chance, and I think it will pay big dividends.

DR. HOGELAND: Thank you, Dr. Noon. I think the paper was very interesting. I have a case where I operated for acute appendicitis and this girl continues to have pain. We are not going to do anything more, but when I get back home I am going to study this paper and find out where this pain is coming from. You will teach the old dogs new tricks, after all.

Common Feeding Difficulties in Pediatric Practice

J. TRAVIS BENNETT, M. D.
El Paso, Texas

THE opportunity for observing and attempting to correct some of the common difficulties encountered in feeding infants and children frequently falls to the lot of the pediatrician. Therefore it may be both pertinent and profitable to us all to consider a few of these difficulties as met with in practice and by our exchange of ideas stimulate enough interest to affect the welfare of the infants concerned.

BREAST FEEDING

Since the milk of every mammal is specific for its young and since the perfect substitute has not yet been found, it behooves us to make every intelligent effort at maintenance of breast feeding. Grulee[1,2] has always been an ardent champion of the maintenance of breast feeding; and, in urging efforts along this line, has pointed out the relative cheapness of the milk, the comparative ease for the mother, and the superior general health of the breast-fed infant as compared to the bottle-fed. However, we must realize that numerous demands are currently made upon the modern woman—the economic necessity of return to work after arrival of the infant or the requirements of social functions, etc., all of which tend to curtail breast feeding. Although the most efficient galactagogue is a vigorously nursing infant, one should never lose sight of three fundamental physiological facts upon which successful breast feeding depends: (1) there must be regularity of feeding; (2) there must be complete emptying of the breast at each nursing; (3) stimulation may be increased by nursing from both breasts at each feeding.

FEEDING FAULTS

Failure to thrive on the breast may be due to underfeeding, to overfeeding, or to inherent faults in the mother. An infant suffering from underfeeding is restless, cries a great deal from colic, fails to gain properly, exhibits poor tissue turgor, and may be either constipated or may have numerous dark green "starvation" stools. Vomiting may be a frequent symptom of such an infant, and is

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due to swallowing air from nursing an empty breast. Naturally under such circumstances a nervous tension is very apt to arise in the mother which may be reflected in the infant and a vicious circle becomes established. The remedy consists in a proper complemental or supplemental feeding (to be discussed later), the use of sedatives for the infant, firmness in handling both mother and infant, and the use of a quiet room for the infant.

An overfed infant is a restless, uncomfortable baby who gains too rapidly (over 8 or 9 ounces a week), regurgitates his feedings (which may cause a loss in weight if persistent), has rather loose stools filled with greasy curds, and who may have much colic, gas and hiccups from too rapid feeding with resultant air-swallowing. This is the type of infant who is not infrequently weaned because "the milk disagrees", when the proper procedure would be a decrease in the feeding time and a dulling of the appetite by an ounce of water or Casec solution immediately preceding the breast feeding.

There may be other conditions present, such as faults in the mother, which by their mere presence may so interfere with successful breast feeding that all our efforts at maintenance of a breast milk supply are defeated. An anxious mother, especially if the infant is her first child, may by her anxiety cause a reduction in her milk supply and thereby initiate the vicious circle described previously. Depressed and retracted nipples make it difficult for even a vigorous infant to nurse long enough to stimulate the flow of breast milk sufficiently or may so discourage the infant that he completely refuses to nurse. Appropriate treatment by systematic massage and the use of a mechanical breast pump in many cases remedies this defect. Cracked nipples, by causing pain in the mother, frequently lead to weaning, although the employment of a nipple shield and appropriate local applications may overcome this fault.

On the other hand it is not out of order to sound a warning against the danger of attempting to keep an infant exclusively on the breast for too long a time when the infant should be receiving additional food; this is especially true at the present time since we have at our disposal more advanced yet simplified methods of feeding, a greater variety of foods from which to choose and adequate refrigeration of the formula after it is prepared. Far too often we see such a baby who is fretful, gains poorly, has become pale and has flabby tissues, but who is allowed to nurse the breast whenever he so desires in an attempt to keep him on the breast as long as possible. Do not allow such a state of affairs to develop. Any normal young infant that is on the breast alone, who is not vomiting and who has no diarrhea, but who is not gaining, is not getting enough to eat and should be given more. (Brennemann[3]).

COMPLEMENTARY AND SUPPLEMENTARY FEEDING

Let us therefore consider the question of additional food. A complementary feeding is that term applied to a bottle feeding which immediately follows a breast feeding. Supplementary feeding is the replacement of one or more breast feedings by a bottle feeding.

There is unanimous agreement among all authorities on infant feeding as to the importance of breast milk in feeding the premature infant. Dr. Julius Hess[4] states "Human milk is the food of choice for the premature infant and this applies more especially to small infants". Marriott[5] and Brennemann[6] have also counseled the use of human milk for these infants. However, these authorities all find it advisable to increase the protein intake of the premature infant by the addition of 1 part skimmed lactic acid milk (buttermilk) to 3 parts of breast milk.

In the choice of a supplemental feeding for premature infants, many milks have been employed with varying success, among them being lactic acid milk, protein milk, condensed milk, evaporated milk and the various processed milks such as Similac, Dryco and Lactogen. Brennemann[6] frankly states his preference for condensed milk, especially for the feeble, apathetic premature, and quotes as his authority Bachmann, who secured his best results in 511 cases employing condensed milk. I desire to subscribe to this opinion also, since I have found condensed milk the best substitute for human milk in feeding premature infants. It should be clearly understood, however, that condensed milk is deficient in fats and proteins, and should therefore be either modified or replaced by a balanced formula as rapidly as the infant's tolerance permits.

Of recent years there has been considerable discussion about the advisability of using a prelacteal feeding or hydrating solution, such as first advocated by Kugelmass, in an attempt to reduce the initial weight loss of the newborn and prevent an inanition fever. This solution is given at regular intervals during the first 3 or 4 days of an infant's life while the breast milk is coming in. I consider this a desirable procedure in the weak or apathetic infant, but its advisabiilty is open to serious question in the case of the vigorous full term infant. Dr. Charles Hendee Smith[7] states, "It has not been shown that it is worth while to attempt to avoid this loss" (of weight), and Poncher[8] has warned that "many babies have been unnecessarily weaned from the breast because of the injudicious use of the prelacteal feeding". It is probably wiser to use a moderate amount of such a feeding together with an abundance of water, but not to the point of complete satisfaction of the infant's appetite. Complemental feeding of the new born infant may produce the same result as the injudicious use of a prelacteal feeding. Rodda and Stoesser reported that in one Minneapolis hospital giving complemental feedings as a routine, 63% of the new born infants were wholly breast fed on discharge; while in another hospital where complemental feedings were not given as routine, 92.2% were wholly breast

fed on discharge. The best stimulant of an abundant supply of breast milk is a vigorously nursing infant and he will not nurse vigorously if his appetite has been satisfied.

UNDERFED BREAST BABY

The underfed breast baby is usually a miserable little creature who upsets the entire household by his fretting and crying, his vomiting and attacks of colic. Frequently the mother is worn from her heroic struggle to maintain the baby on the breast to the detriment of both her health and that of the infant. The stools of this infant are characteristically green or brown with many greasy soft curds which produce excoriated buttocks; this condition is due to the ingestion of a small amount of breast milk rich in fat. The use of a complemental feeding in conjunction with breast feeding may remedy the difficulty especially if a food of low fat content is chosen. Kerley[9] has stated, "When a mother cannot give her infant at least 2 satisfactory breast feedings daily, it is advisable to wean the child". Most intelligent mothers will be able to determine at what point it is no longer advisable to keep the infant on the breast.

CHOICE OF FEEDING

In our choice of food for complemental and supplementary feeding, we have a great variety from which to choose ranging from fresh cow's and goat's milk, evaporated milk and condensed milk to the various processed and reconstructed milks. Because of the physiological fact that infants tolerate fat rather poorly and because of the high content of irritating volatile fatty acids in cow's milk, it is desirable to use a partly skimmed milk at first. Therefore, let me at this point warn you of the dangers of upset attending the use of Jersey milk in infant feeding, which well-meaning parents may use to produce a very inferior type of infant to be described later under "Fat Intolerance". Many infants tolerate evaporated milk, either with or without the use of lactic acid, and many can take partly skimmed fresh cow's milk. One of the most satisfactory supplemental foods in my experience, especially in young infants, has been the partly-skimmed processed milk Dryco. In some cases the only milk an infant will tolerate is condensed milk; the danger from the use of such a milk high in carbohydrate and low in fat and protein content is the production of a fat, flabby baby lacking in resistance to any infection. This danger can be readily obviated by fortification of the condensed milk formula with soy bean flour as advocated years ago by Ruhrah[10, 5b]. Infants fed on this type of formula are superior specimens, and I heartily recommend its use.

ECZEMA

It may be in order to say a few words about eczema due to sensitivity to cow's milk. Many formulae have been devised to feed these infants after the failure of the breast milk supply. Churned buttermilk has proven effective in some instances, goat's milk has afforded relief in others. In some of the reconstructed milks (such as Sobee) the cow's milk protein has been replaced by soy bean. It was Kerley who first recommended the use of heat-treated evaporated milk cooked for from 3 to 6 hours in a double boiler; by this treatment the protein of the cow's milk is changed so that it is less irritating to the allergic infant. In quite a few instances success may be achieved by the use of fresh skimmed milk cooked similarly and employing for the added carbohydrate the non-allergic Alerdex. All of these formulae are worthy of trial in any given case of eczema in the reasonable hope that one method will prove effective in affording relief to a distressed infant and mother. Of course if the eczema is due to foods other than milk or to surface contact with various allergens, changing the formula will have no effect on the skin condition, and therefore other measures become indicated.

FAT INTOLERANCE

One of the most common conditions that we pediatricians encounter in the artificial feeding of infants is fat intolerance. I believe that the fat content of cow's milk causes more trouble than any other ingredient, and in some instances the fat seems to affect the infant as if it were a slow poison. Infants suffering from this condition are usually pale, have poor tissue turgor and considerable abdominal distension and have a poor appetite. The stool may be that of the typical Milchnahrschaden of Czerny—extreme constipation, dry grey foul soap stool (made up largely of salts of fatty acids) that does not adhere to the diaper—or the stool may be quite variable in character from the grey constipated to the loose greenish curdled stool full of mucous, greasy fat curds and even blood streaks. The remedy consists in the use of a fat-free milk or a change to another animal milk. Fresh or sour skimmed milk may be tolerated, or a powdered skimmed milk may be necessary (Merrell-Soule powdered skimmed milk). Whole or skimmed goat's milk may prove suitable. Two cases recently from Mexico were treated successfully on burro's milk, one infant being a 7-month-old baby who weighed 7 pounds at the start of the new milk. The secret of success of the burro's milk is probably the low fat content of 1% and its chemical resemblance to breast milk.

CELIAC DISEASE

Celiac disease is a condition closely allied to fat intolerance seen rather frequently in this region, and may begin as early as the second half of the first year or may begin following a protracted diarrhea. The fault lies in the inability of the organism to digest fat together with an associated carbohydrate intolerance. The typical well-advanced case is characteristic—the pale pinched face, extreme wasting of the extremities and a protuberant soft abdomen often markedly distended with gas occurring in an individual who exhibits marked irritability and stunted growth. The stools are voluminous—greater in amount than one would expect from the

food intake—frequent, pale grey, very foul smelling and quite often filled with gas bubbles. This type of diarrhea may alternate with constipation. Owing to the chronic nature of the condition, the diet must be adhered to for years with relapses occurring not infrequently. The diet consists in rigid exclusion of the carbohydrates and a high protein diet of fat-free buttermilk or protein milk, curds made from skimmed milk and with the gradual addition of the protein of egg, meat, etc. As Haas[11] originally showed, ripe or powdered banana is usually well tolerated even to the extent of a dozen a day. Recent work has stressed the importance of the inclusion of sufficient vitamins in the form of Oleum Percomarphum and tomato juice and brewer's yeast, as well as mineral salts, iron and liver in the diets of these patients. The addition of other articles to the diet is a gradual process, each new addition being in the manner of an experiment, until after a year or two these patients may take almost a normal diet except for a sparing use of sugars and sweets.

PYLOROSPASM

The so-called hypertonic infant is encountered rather frequently in pediatric practice. Because of his fretfulness and persistent vomiting he is usually changed from one feeding to another without benefit. These infants are characterized by a generalized tenseness of the voluntary muscles of the body as well as by an overactivity of the sympathetic nervous system producing pylorospasm. Clausen's[12] criteria for diagnosis are: gastric peristalsis, projectile vomiting, absence of a palpable pyloric tumor and relief of symptoms by physiological doses of atropine or by sedatives or by thick feeding. In my experience thick feedings low in fat preceded by from 1/12 grain to 1/6 grain of luminal at each feeding have usually proven effective in affording relief. In these measures fail to relieve the symptoms, congenital pyloric stenosis must be considered even though no pyloric tumor can be felt.

CONSTIPATION

We frequently meet the constipated infant or child whose solicitous parent implores us to give relief. This, however, is not always a simple matter, especially if the patient is one possessing irregular feeding and toilet habits who is allowed to eat between meals or if he has become habituated to enemata. The establishment of regular toilet habits together with the temporary use of mild laxatives or mineral oil may relieve the situation. In cases of fat intolerance, removal of part of the butterfat from the diet is of aid. The use of laxative foods, such as mashed or chopped vegetables, stewed fruits, Karo or prune pulp and figs should not be neglected. Brer Rabbit green label molasses, by increasing fermentation, works wonders in many cases. Megacolon, that condition in which there is a tremendous increase in the caliber and length of the large gut, should always receive consideration as a possible cause of constipation, especially since effective treatment in this condition is of a different nature than treatment employed in the usual case of constipation. Patients suffering from megacolon obtain a great measure of relief by the use of a low-residue concentrated diet and are made worse by the bulky diets employed in the usual case of constipation. A tight rectal sphincter is the cause of constipation in a number of infants; it may usually be corrected by the insertion of a well-oiled finger into the rectum and by passage of firm feces which tend to smooth out the obstructing folds.

Finally, there is a certain type of individual whom I choose to characterize by the term "lazy bowel" whose general muscle tone, especially the smooth musculature of the bowel, is extremely poor because of a vitamin B deficient diet. The administration of vitamin B complex to such an individual usually produces a more normal intestinal tone with the result that constipation becomes relieved and the appetite improved.

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Tuberculosis of the Tonsil

(Resume of Literature with Report of a Case)

EARL H. BROWN, M. D.
Tucson, Arizona

CLINICAL tuberculosis of the tonsil is a fairly rare condition. Considering that the tonsil is a lymphatic structure and that the tubercle bacillus has a predilection for lymphatic tissue it is strange that this should be so.

Tonsil tuberculosis may be divided into (1) occult, or non-clinical and (2) manifest, or clinical, and also into (1) primary, and (2) secondary.

Occult tonsil tuberculosis is more common than we suppose. Various authors have reported from 0.5 to 6% occult tuberculosis in tonsils routinely examined at operation in different large institutions.

Manifest tonsillar tuberculosis is a much more rare condition and even as secondary to pulmonary tuberculosis is seen in a very small percentage of cases. Manifest or clinical tonsil tuberculosis may be in the form of either a tuberculoma, miliary tubercles, a superficial (lupus like) ulceration, or a deep infiltrative process. The last two are the more common of these types. Some authorities believe that tuberculosis of the tonsil is practically always secondary to some process elsewhere in the body. However, 57 cases have been reported in the literature up until the middle of 1937 as primary tonsillar tuberculosis[1].

It is the purpose of this paper to review briefly some of the literature on this subject and to report a case of clinical tuberculosis of both tonsils.

Wood[2] in 1905 collected in the literature 1671 cases of tonsils removed and examined microscopically. The percentage of tuberculosis in these was 5.2%.

Sewall[3] in 1911 reported 6.2% tuberculosis in 772 cases of tonsillectomy.

Crowe et al[4] in 1917 found 4.6% tuberculosis in 1000 cases.

Weller[5] in 1921 reported on 8,697 tonsils removed at the University of Michigan Hospitals and routinely examined microscopically for evidence of tuberculosis. He found the evidence of tuberculosis in tonsils removed for chronic tonsillitis to be 2.35%.

Mullin[6] in 1923 analyzed 400 cases and found that 4.25% were positive microscopically for tuberculosis. Seventeen per cent of these cases had some evidence of tubercular gland infection. Eliminating these, the remaining cases operated upon showed the presence of tubercles in 1.25%. He states that in advanced pulmonary tuberculosis the tonsils will show evidence of involvement in the majority of the cases. In chronic glandular tuberculosis (cervical) he believes 50% will show evidence of tuberculosis in the tonsils.

MacCready and Crowe[7] in 1924 reported 3,260 cases operated, with tuberculosis of the tonsils in 4.18%. Fifty of these cases that were microscopically positive were followed for five years by repeated chest x-rays and none showed any pulmonary involvement. They concluded that the tonsils which showed only occult tuberculosis with no other signs of the infection elsewhere were unimportant clinically and that these patients should not be stigmatized with the diagnosis of tuberculosis.

Wilkinson[8] in 1929 reported 10,000 pairs of tonsils examined microscopically at the Mayo Clinic during the years from 1923 to 1927. All the tonsils removed showed chronic tonsillitis. Fourteen per cent showed unusual pathological changes; 11% had some cartilage or bone structure, 0.5% showed tuberculosis, 0.06% showed the presence of trichinae. He stated that an analysis of this large group showed that the percentage of tuberculosis in tonsils removed was declining.

Paterson[9] 1929 reported 161 cases of tuberculosis of the cervical glands in which the tonsils had been removed and examined microscopically. Thirty-five per cent of these were positive. He recommends that in cases of tuberculous cervical adenitis the tonsils should always be removed. The acid-fast bacillus, he states, may pass through the tonsils in children to the glands without leaving any evidence in the tonsils.

Dickey[10] in 1930 reported a case of a six-year-old boy with a tuberculous ulceration of both tonsils which he considered a primary infection. The patient was well three years after tonsillectomy. He says that the bacilli first gain entrance into the crypts and then invade the germinal centers of the tonsils and spread to the cervical glands from there.

Webster[11] in 1932 studied 132 cases. Eighty-six per cent of these had tubercular glands and of these 46% showed evidence of the infection in the tonsils. The remaining 46 cases who had simple hypertrophy of the tonsils were all negative for tuberculosis. He advises that tonsillectomy is indicated in the treatment of tuberculous adenitis. Twenty-four of the positive cases were studied as to the type of tubercle organism; 17 of these showed the bovine type and 7 the human type of infection.

Magee[12] in 1937 reported a microscopic study of 6,359 cases from 1933 to 1935. Evidence of tuberculosis in these was 0.44%. Compared with 2.35% reported by Webster, he concludes that tuberculosis of the tonsils is decreasing.

Freeman[13] in 1937 reported a case of a man 33 years old with multiple ulcers of the tonsils, pillars, and pharynx who recovered after treatment with 50% trichloracetic acid. This was considered a primary infection, as he could not demonstrate other evidence of tuberculosis.

Alpert[14] in 1938 reported 202 cases of tonsils removed from sanatorium patients. Ten per cent of these tonsils showed evidence of tuberculosis. All were negative clinically and were removed for chronic tonsillitis and cervical adenopathy; mostly in children. He also stresses the importance of tonsillectomy in cervical gland cases.

Bordley and Baylor[15] in 1938 reported on 69 patients that were found by microscopy to have tonsillar tuberculosis, between 1912 and 1924. The cases were reinvestigated in 1935. Forty-seven of these were operated prior to 14 years of age. Forty-five could be traced. Three cases died (only one of a tuberculous disease). The others were in good health. Thirty-two of the cases were past 14 years at operation; only 16 of these could be traced, 3 were dead (2 of pulmonary tuberculosis). Five of the remaining had some form of tuberculosis. They concluded that in pre-adolescence, occult tonsil infection meant little; in adult life it meant that the patient had a good chance of developing pulmonary tuberculosis.

Ahronheim[16] 1938 found 0.77 per cent of tuberculosis in 782 tonsillectomies. None of them were clinically positive and in six to eleven months after operation all were in perfect health.

Pollard & Combs[17] in 1938 made a follow-up study

of 107 patients who had a microscopic diagnosis of tonsillar tuberculosis. This follow-up study lasted over a period of four and a half years and the average age of the patients was 18 years. Three cases developed active pulmonary tuberculosis, one developed cervical lymph node tuberculosis, and one developed tuberculosis of the spine. Twenty cases with other forms of tuberculosis at time of operation did not develop any additional lesions. Seventy cases with no other evidence of tuberculosis did not develop any lesions. Their conclusions were that cases in which the tonsils were positive microscopically for tuberculosis should have a thorough check-up for evidences of the disease elsewhere. If this examination was negative, there would be little chance of tuberculosis developing from the tonsil infection after tonsillectomy. Patients with tuberculous tonsils and evidence of tuberculosis elsewhere should be carefully watched post-operatively for further spread of the disease.

During the past seven and a half years there have been 510 cases of pulmonary and bone tuberculosis admitted to the Southern Pacific Sanatorium (Tucson, Arizona) and during that time there has been only one clinically positive case of tonsillar tuberculosis. There have been no studies made for occult tonsillar tuberculosis. No doubt the number of them would be considerable. However, practically all the cases had positive sputum on admission and therefore were not fit subjects for tonsil surgery.

CASE REPORT

P. H., aged 41, admitted to the Southern Pacific Sanatorium 2-1-38. He complained of frequent colds and slight cough since 1923. He gave no history of chest pains, hemoptysis, or night sweats. He stated that for the past two years he had had frequent sore throats, off and on, lasting three and four days at a time. On December 24, 1937, while at work he fainted and was hospitalized. His best weight had been 150 pounds. This was maintained until two years ago. Family history was negative for tuberculosis. He had been employed as a stevedore.

Physical examination revealed a well developed but poorly nourished man with no evidence of dyspnea. Head, abdomen, and extremities were negative externally. Examination of the chest showed evidence of bronchial breathing in the paravertebral region with a few squeaking rales in the infraclavicular region on the right side. The left lung was essentially the same. The examination of the ears, nose and throat showed edema and thickening of the anterior and posterior pillars of both tonsils. There was an ulceration the size of a quarter on the left tonsil at the upper pole. Both tonsils were edematous. The edema of the mucosa extended into the soft palate and uvula. The posterior pharynx and the nasopharynx were very pale and edematous, with several small tubercles scattered over the surface. This deep infiltrative process extended up into the mucosa of the posterior nares and could be visualized through the nose by using a nasal speculum. The ears and anterior nares were negative. The vocal cords were freely movable There was a moderate amount of edema of the posterior laryngeal wall. The voice was clear and the larynx was exceptionally free of gross tuberculous involvement considering the extensive process in the ora and nasopharynx.

His temperature was 99.6°, pulse 92, respiration rate 20, sedimentation rate 125 m.m. in sixty minutes, weight 132 pounds, urine negative, blood count negative except for mild anemia, Kolmer and Kahn negative, sputum (40 c.c., 24 hours) positive for tubercle bacilli, vital capacity 2700 c.c. X-ray of the chest was interpreted as follows: tuberculosis, pulmonary, chronic, advanced, bilateral. X-ray of the sinuses was reported as negative. A smear from the tonsils was positive for tubercle bacilli. A biopsy of both tonsils was reported by Dr. Lindberg as showing evidence of a tubercular process (tubercles, granulomatous tissue a foci of lymphocytic infiltration).

The treatment of the lungs, advised at the weekly conference, was: bed rest for one month and treatment of the throat before attempting any collapse therapy. The patient insisted that all his trouble was in his throat and said he had been trying to get doctors to take his tonsils out and cure him. He treated locally with 50% trichloracetic acid, and warm saline gargle and benzocaine lozenges were advised.

The throat was treated bi-weekly for three weeks as above with no improvement. He had considerable pain on swallowing even soft and liquid food.

Note 2-25-38. It was decided to treat the throat with 30% silver nitrate. This treatment was carried out three times at weekly intervals. No improvement.

Note 3-9-38. The process was extending into the soft palate more extensively. There was a large ulcer posterior to the last lower right molar tooth.

The patient's course was continuously downhill; the temperature varied from normal to 101°. He died 3-15-39. The cause of death was pulmonary tuberculosis, tuberculosis of the tonsils, pillars, pharynx, nasopharynx.

An autopsy performed 3-15-39 by Dr. Lindberg showed extensive tuberculous involvement of the upper two-thirds of the lungs with normal lung tissue at the bases; tuberculosis of the pharynx and tonsils; edema of the laryngeal walls; the trachea and bronchi were clear; ulceration in the terminal ileum. Microscopy showed the tuberculous process in the spleen, liver, lungs, and ileum.

This was a case of clinical manifest tuberculous tonsillitis with involvement of the soft palate and nasopharynx. It was associated with the pulmonary process and probably secondary to it, although from the history both processes may have been present for some time. The intestinal tract, spleen and liver were no doubt involved in the terminal spread of the disease.

COMMENT

From the literature it is evident that the number of tuberculous tonsils in those removed routinely is decreasing. It is also stressed that those tonsils showing evidence of tuberculosis, but negative clinically and not associated with other evidence of tuberculosis, are not important clinically. These patients rarely develop pulmonary tuberculosis. In the case of cervical glandular tuberculosis, the tonsils should be removed. In these cases a high percentage of tuberculous tonsils may be expected as they probably act as the entrance of the pathway to the cervical glands.

Thomas-Davis Clinic.

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Dermatitis From Cosmetics

LESLIE M. SMITH, M.D.
and
RAYMOND P. HUGHES, M.D.
El Paso, Texas

THE use of cosmetics dates from antiquity, but it was twentieth century super-salesmanship which caused the cosmetic industry to assume such tremendous proportions. The cosmetics bill of the United States for 1934 was $250,000.00.[1] The judicious use of cosmetics to enhance woman's natural charms is, perhaps, desirable. The occasionally untoward reactions resulting from their use, however, must be borne in mind. Of these, contact dermatitis is the principial form.

Contact dermatitis is a superficial inflammatory reaction resulting from contact of the skin with an irritant. It is primariily an epidermic reaction. The substance responsible may work in one of three ways:

1. It may be essentially an irritant, capable of causing a dermatitis on normal non-sensitive skin.
2. It may be a usually harmless substance to which the epidermis has become hypersensitive.
3. It may be a photosensitizer, and cause reaction only after exposure to the sun.

The type of hypersensitiveness seen in contact dermatitis is generally considered to be distinct from, and probably unrelated to, familial allergy or atopy. There are no blood reagins present, passive tranfer does not occur, and the skin does not usually react to scratch or intradermal tests with wheal formation, but to patch tests with erythema and vesiculation.

Contact dermatitis is erythematous, vesicular or exudative, depending on the severity of the process. It may become lichenified only as a result of long, continued scratching, and secondary changes. The location of the eruption and the history will often give a clue to the offending agent. Patch tests properly done should confirm or deny the suspicions.

At the head of the list of cosmetics which have been found to cause dermatitis are the hair dyes. No one should have the hair, brows or lashes dyed without first having a patch test with the dye to be used. Severe and dangerous reactions about the face and eyes extending to the chest and arms are seen fairly frequently following the dyeing of even a small lock of hair. Prosser White[2] gives the following classification of hair dyes:

1. Vegetable dyes, such as henna and walnut juice.
2. Mineral dyes—copper, silver or lead salts, combined with reducers such as pyrogallol or sodium thiosulphate. They form sulphides on the hair and give brown to black tints.
3. Synthetic dyes. The chief of these is paraphenylenediamine.

The vegetable dyes are generally harmless, the mineral compounds somewhat more dangerous, and the synthetic dyes by far the most likely to cause dermatitis.

So-called "hair tonics" may contain arsenic, quinine, resorcin or mercury, to any of which the epidermis may be hypersensitive.

The various essential oils used in perfumes are capable of causing dermatitis, and also a mottled pigmentation of the skin on exposure to the sun, due to the photosensitizing property of the oils. Oil of bergamot is the principal offender.

Many powders contain orris root, starch, carmine and perfumes. Some contain lead, mercury and bismuth. Of these, orris root has a particularly unsavory reputation as a skin sensitizer, but the other ingredients are also capable of causing dermatitis.

Soaps are fairly common causes of contact dermatitis. This may be from sensitization to some ingredient, or it may be from failure to rinse off the soap. If soap is left on the skin repeatedly it may cause dermatitis on a non-sensitive skin.

Depilatories usually contain barium or calcium sulphide, which are irritants.

Anti-sweat preparations contain aluminum compounds or salicylic acid, and are likely to irritate the skin if used often. This is especially true in hot weather.

The dyes, such as carmine, in rouge may cause dermatitis, and lipstick is responsible for a good many cases of cheilitis (dermatitis of the lips). Some lipsticks contain eosin, which is a photosensitizer.

Of the creams, bleaching creams are the most likely to cause dermatitis. They contain mercury or salicylic acid in slightly irritating quantities. The mercury preparations sometimes cause a bluish gray discoloration of the skin. Vanishing cream contains soap. Eye shadow is usually harmless unless it contains aniline derivatives.

The use of nail polishes and polish removers (principally acetone) may cause peeling and splitting of the nails, and dermatitis of the fingers.

Permanent wave solutions may cause severe dermatitis of the scalp and forehead, and of the hands of operators. According to Tulipan[3] the common ingredients are ammonium carbonate, keratin, lanolin, monoethyl ester of ethylene glycol, petrolatum, potassium and sodium carbonates, ammonium chloride, sulfonated oils, potassium sulphite and oleic acid.

Unfortunately most of the cosmetic formulas are secret, and it is difficult to know just what ingredients are being applied to the skin. However, patch tests with the preparations as actually applied will give valuable information as to the cause of the dermatitis.

During the acute stages of dermatitis a mild astringent wet dressing is most efficacious. An aqueous solution of ½% to 1% aluminum acetate is very satisfactory. Ointments should not be used at this stage. After the acuteness has subsided, mildly stimulating preparations, such as 2% to 4% ichthyol in the form of a paste, are helpful At this stage small doses of x-ray will hasten return of the skin to normal. If there is a moderate amount of infiltration which does not disappear readily, either x-ray, or 2% or 3% ointments of coal tar, should be used. It is best to avoid soap and water on the involved skin during the acute and subacute stages of the eruption. It is of course, necessary to avoid exposure to the offending agents.

After a cosmetic dermatitis has healed, the patient is usually at a loss to know what cosmetics can be used safely in the future. Although there is practically no substance to which the skin may not become sensitive, there are several manufacturers who prepare cosmetics described as hypoallergic. These are free from the ingredients most commonly causing irritation. These manufacturers will furnish the physician with lists of the ingredients contained in their various preparations. It is comparatively safe to prescribe these cosmetics.

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Hematuria and Abdominal Pain Associated with Sulfapyridine

VINCENT M. RAVEL, M. D.
and
WICKLIFFE R. CURTIS, M.D.
El Paso, Texas

THIS case of hematuria and pain associated with sulfapyridine is being reported to add to those published,[1] because of certain features that characterize it as being somewhat singular. Mrs. E. H., white female 56 years of age, was seen at home June 9, with chief complaints of cough, fever, pain in side and bloody sputum.

Her past history dates back some 15 years with an active pulmonary tuberculosis. Twelve years ago she had eleven ribs removed with complete collapse of left lung. For the past six years she has given an allergic history of severe bronchial asthma. Repeated questioning failed to reveal any urological symptoms. There was no nocturia, dysuria, renal, ureteral and vesical pains, burning or frequency.

Unfortunately, the laboratory work on this case has been held to a minimum, due to the consideration of the patient's financial status. During her previous illness, the patient was told that if she ever developed pneumonia, she "would not live 15 minutes." She has maintained a psychopathic fear of pneumonia since her thoracoplasty. Due to this situation, it was felt that probably it would be better to attempt to treat the patient at home, but as she became rapidly worse, she was admitted to the hospital June 11, with diagnosis of bronchopneumonia. Sputum examination revealed type XI pneumococci.

Due to her allergic history, it was considered best that serum not be used, and furthermore, that the sulfapyridine be given in most conservative doses. The patient had a total dosage of 5 Gm. over a period of four days, at which time the urinary findings revealed blood, gross and microscopic, granular and hylaine casts, a trace of acetone, diacetic acid, numerous pus cells and two plus albumin. The sulfapyridine was discontinued immediately. Concurrently with these urinary findings, the patient experienced an excruciating attack of renal colic requiring narcotics for relief. Coincidently with this, there developed for twenty-four hours a tendency towards anuria. Fluids were forced and the patient became nauseated and could hold nothing on her stomach, 3,000 c.c. of 5% glucose and saline were given intravenously over a period of twenty-four hours, included with the last 1,000 c.c. there was one ampoule of uretone. The following day the urine showed few blood cells and few casts. At no time was the blood pressure elevated. Twenty-four hours after the administration of only 2 Gm. of sulfapyridine, which was given at the rate of ½ Gm. three times a day, the temperature which was

103° on admission returned to normal. The N. P. N. at the time of the hematuria was 37½ K.U.B. revealed no shadows suggestive of stones. Since the sulfapyridine was discontinued, the patient had no further attacks of colic and the convalescence was uneventful.

COMMENTS

1. In spite of the small dosage of sulfapyridine in comparison to cases of Southworth and Cooke, this patient developed symptoms comparable to those produced by the patients of these authors.

2. Nitrogen retention was not a feature of this case.

3. Kidney stone was not definitely ruled out because no retrograde pyelogram was made. However, the authors feel that this was not ruled out completely in the cases reported by Southworth and Cooke. Furthermore, the disappearance of the renal symptoms following the discontinuance of sulfapyridine is quite suggestive that this was an etiological factor.

SUMMARY

A case of hematuria associated with the administration of sulfapyridine is reported. The dosage of sulfapyridine producing these symptoms is smaller than those previously reported in the literature. The renal symptoms promptly abated with the discontinuance of sulfapyridine.

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Sulfanilamide Therapy in Mastoiditis

By
LEWIS FRANCIS MORRISON, M. D.
San Francisco, California

The more or less widespread use of sulfanilamide by all branches of the profession has resulted in a mass of facts and figures. The true value of this data will not be available for some time to come. Thus far, the majority of the reports available in the literature stress the favorable results obtained. This is also true of the personal communications. This is only natural. It is not my purpose to attempt to belittle these reports nor endeavor to discourage the use of the drug wherein there is logical reason for believing that it will be of value in assisting the patient to overcome an infection. Certain facts in relation to mastoiditis have come to my attention and it is my sincere wish to present them in an unbiased manner. With the exception of two instances, I cannot recall any cases wherein the use of sulfanilamide prevented the necessity of surgical intervention, and I am a bit skeptical about the actual therapeutic value in these two cases. The administration of the drug did have a definite psychologic value for all concerned and this was sufficient to encourage the people in charge to accept the consultant's decision that operative intervention could be delayed with safety. The storm subsided within 48 hours. The patient recovered without being subjected to surgery and the drug was given full credit. These two patients may have fit into the classification of osteothrombo-phlebitic mastoiditis. Both had had a paracentesis and on the following three successive days had had marked temperature rises and sensations suggestive of a chill. Without the benefit of sulfanilamide, they may have continued on their septic course until surgery was essential, yet one cannot dismiss from one's mind numerous instances in the past wherein a similar picture was presented and delay of 24 to 48 hours gave the patient a chance to control the infection and obviate surgical intervention.

My main criticism of the use of the drug in cases of otitis media of two to four weeks' duration is that it can and does mask the true picture and has delayed operation from one to eight weeks. Fortunately the drug does not diminish the sagging of the posterior superior canal wall nor greatly change the amount or character of the discharge from the ear even though it does cause a definite flattening out of the temperature curve, a definite diminution in sensibility to pain on pressure over the involved mastoid and at times a reduction of the white blood corpuscles so that they more nearly approach the average normal. An examination of the temperature charts of these patients shows that the administration of the drug resulted in a rapid fall in temperature close to or even slightly below the accepted normal line and that the daily curves had a small amplitude of 1-1½° F or ½-¾° C. If after 10 to 14 days the drug was withheld there was a marked rise within 24 hours. Re-establishment of the medication brought about a return to the former flattened curve. In one instance, this procedure had to be repeated four times over a period of eight weeks before all the interested parties were sufficiently convinced that surgery was inevitable.

I have discussed with a member of the Pharmacology Department who is working with sulfanilamide and its combinations, the possibility of the drug having any analgesic property. He assured me that none had been ascribed to the drug but said that its chemial structure was such that with minor readjustment of the integral parts, it would take on the form characteristic of our coal tar derivities so well known for their analgesic action. This fits

(Continced on page 275)

(Read before Arizona State Medical Association, Phoenix, April 13-15, 1939.)

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EDITOR
M. P. Spearman, M. D.
1001 First National Bank Bldg.
El Paso, Texas

ASSOCIATE EDITORS
L. B. Cohenour, M. D. ..... Albuquerque, New Mexico
Orville Egbert, M. D. ..... El Paso, Texas
Preston T. Brown, M. D. ..... Phoenix, Arizona
Wm. John Pangman, M. D. ..... El Paso, Texas

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SILVER JUBILEE

Twenty-five years of service to the entire medical profession of the Southwest will be signalized when the Southwestern Medical Association meets in El Paso, November 9-10-11.

A quarter-century ago there wasn't much known about insulin, or liver for pernicious anemia, or pneumothorax therapy of tuberculosis, or vaccines for typhoid, or antitoxin for diphtheria, or corneal transplants, or blood transfusion, or brain surgery. The Southwestern physician was isolated from the centers of medical knowledge. Serving on the outposts as he did, he often had occasion to deplore his isolation. Realization of the desperate need for scientific organization began to crystallize, and after long discussion and planning among a small group there was founded in 1914 the Southwest Medical and Surgical Association. The inaugural session was held in El Paso, December 10-12, 1914. Dr. R. L. Ramey was the first president; Dr. W. L. Brown, 1st vice president; Dr. J. R. Gilbert of Alamogordo, 2nd vice president; Dr. C. P. Brown, secretary and treasurer. Trustees were Dr. F. E. Shine of Bisbee, Dr. J. G. Holmes of Alamogordo, Dr. M. G. Paden of Carrizozo. Dr. Felix Miller of El Paso was a member of the Entertainment Committee. Dr. Jas. Vance of El Paso headed the Program Committee. Dr. R. E. McBride of Las Cruces spoke on "Pellagra in the Rio Grande Valley", and reported three cases. Dr. John Bacon of Miami read a paper on "Spinal Anesthesia". Dr. W. W. Waite of El Paso demonstrated pathological specimens. Dr. L. S. Peters of Albuquerque (past president of the Association) spoke on phases of tuberculosis. The policy of utilizing local members as guest speakers prevailed for many years. Under the administration of President Jas. J. Gorman of El Paso, the present usage of out-of-territory teachers was brought to fruition. An interesting early program note says, "There will be automobiles at the station to meet all incoming trains and carry members and guests to headquarters. Look out for them."

Just a few years ago the name of the society was changed to Southwestern Medical Association, and a renewed determination was made to further develop the clinical conference type of program for the annual sessions. Many of the famed leaders and teachers in American medicine have been presented by the Association. In this way there has been exerted a positive force for the dissemination of new medical knowledge throughout the Southwest.

Soon to be announced is the list of topics and speakers for the 1939 session. Every effort is being made by the Program Committee, headed by Dr. Joseph Greer of Phoenix, to schedule a program vividly demonstrating the progress of the past twenty-five years. Special efforts are being made to round up the older members of the Association. Due honors are being planned for the pioneers. It is hoped that the Silver Jubilee of the society will gloriously punctuate a useful quarter-century of service. Members should reserve the dates of November 9-10-11 for attendance and participation in the significant anniversary of one of the most valuable institutions of their Southwest.

PHYSICIAN'S POLITICS

The impression is abroad that organized medicine has joined hands with a major political party in its natural battle of attempting to oust the one presently in power nationally, and, in many places, locally. Nothing could be more false than that baseless assumption. Organized medicine is composed of individuals possessing the American right to dissent and even raise hell with the concepts of any political party in power. As individuals in the political scene of this nation, physicians are not one whit more endowed with the power to prescribe for society's ills than are other men not possessed of an M. D. degree. It is definitely not the province of any scientific organization to take sides in political arguments between parties seeking the power of public office. One of the reasons that organized medicine enjoys the proud prestige it now does is simply that it has wisely refrained from mating with any political party. One reason why certan business elements in this land now occupy low places in the public's esteem is that these elements have horned in on political affairs, and thereby had mud spattered on their togas.

Recently the fool proposal was made that the physicians of America should, as a group, affiliate themselves with a certain political party. That nutty notion was hustled out of their front pews in a trice. What a grand spectacle it would be to see the windy orations of the politicos blazoned on the scientific pages of our journals! The American Medical Association heard enough gibberish a few years ago at Atlantic City when a United States Senator rambled unsteadily and pointlessly on and on before the House of Delegates. Any physician who cares to waste an hour or so might try reading certain portions of the Congressional Record. If, after this insulting experience to his mentality, he is still enamored of politics as it is played, let him cast about windily and bellow aberrant ideas, and soon he'll be hailed as a new beardless Moses by the brethren down at precinct headquarters. But let him leave his medical society out of it. There are too many sick people needing our best brains to allow our dallying in the devious bypaths of vote-snaring.

True enough, many American physicians do not agree, singly or collectively, with some of the buffoonery now on the stage at Washington. That, praise Jehovah, is the birth-right of all of us, ditchers or doctors. But let no recruiting sergeant for any political party try to weld those individual opinions into a mass movement of organized medicine as a whole. He would, by his failure, be transferred to the street-cleaning department in an outlying precinct, far from the lush down-town beat.

HOPE FOR THE DEAF

Otosclerosis has long presented a difficult problem to the aurist. Many measures of relief have been investigated and usually discarded as possessing too little promise of permanent mitigation of the symptoms of the disease.

There would appear to be reason to build hope on the results now established by Lempert of New York. He has devised a modification of a surgical procedure which essentially short circuits the sound waves around the middle ear directly to a fistula in the horizontal semi-circular canal[1]. The procedure is highly tedious and technical, and as such could possess little merit in the hands of any save the expert. Out of 59 cases operated, Lempert has succeeded in producing permanent fistulae in all but 9[2]. Most of these cases showed marked improvement in hearing, demonstrable with the electric audiometer.

As the case series increases in the service of Lempert and others, more can be definitely stated as to the permanency of the relief to be obtained from the operation. To date it would appear as if great progress had been made in bringing hope to a certain classification of deafness.

1 Lempert, Julius: Improvement of Hearing in cases of Otosclerosis, Arch. Oto. 28:42 (July) 1938.

2 Babbitt, Jas. A.: A Study of Medical and Surgical Aids to Hearing, S. G. O. 68:395 (Feb. 15) 1939.

EXPLANATORY NOTE

An ox came down to a reedy pool to drink. As he splashed heavily into the water, he crushed a young frog into the mud. The old frog soon missed the little one and asked his brothers and sisters what had become of him.

"A great big monster," said one of them, "stepped on little brother with one of his huge feet!"

"Big, was he!" said the old frog, puffing himself up. "Was he as big as this?"

"Oh, much bigger!" they cried. The frog puffed up still more.

"He could not have been bigger than this," he said. But the little frogs all declared that the monster was much, much bigger, and the old frog kept puffing himself out more and more until all at once he burst!!

That recent loud bang in the District of Columbia was the blowing up of Dear Thurman's suit against the American medical trust. Remember all the puffing just prior?

PRICE OF VIGILANCE

When the guards are at play with the pretty kitchen wenches in the court-yard the enemy pikesmen are most apt to scale the walls and slit a number of gullets within the strong-hold.

Just so when medical vigilance is relaxed regarding such public health measures as compulsory vaccination against smallpox. For some time proud spokesmen have pointed out that smallpox was fast becoming a little known, little seen disease. That desirable state of extinction of one of the most terrible scourges of mankind was certainly once rapidly approaching realization. But here and there the guards dallied, lawmakers were misled by the clamor of various loud cults and quackeries, both of performance and mental processes, and laws requiring compulsory vaccination were killed in passage or repealed. So once again the warnings are at hand of possible dreadful epidemics to come.

Since 1931 not a single case of smallpox has been reported in New Jersey. That state enforces a compulsory vaccination law. No disfiguring, deadly epidemic of the scourge of the Middle Ages can gain foothold there. During the past 7 years some 13,000 cases of smallpox have been reported in certain of the Northern and far Western states whose combined population is about equal to that of New Jersey's. The New England states are practically completely free of smallpox, due to compulsory vaccination laws.

Let medical men everywhere remain eternally vigilant when the cults and quacks in the guise of pretty kitchen wenches begin to tempt those on the ramparts. Let not a medieval pandemic be charged to the dallying of the physicians of this land.

Special Section

Arizona State Medical Association

PRESTON T. BROWN, M. D., *Associate Editor*
403 Professional Bldg., Phoenix, Arizona

COMMITTEE ON SCIENTIFIC ASSEMBLY MEETS AT TUCSON

The Committee on Scientific Assembly met at Tucson, Sunday, July 30th and laid preliminary plans for the Scientific Program for the Annual Meeting to be held at Tucson next April, the Pima County Medical Society to determine the specific dates. There was a full attendance of the Committee including: Dr. D. F. Harbridge, Chairman by virtue of office of President-Elect; Dr. W. L. Minear of Patagonia; Dr. Frank J. Milloy of Phoenix, and Drs. Chas. S. Kibler and Dan L. Mahoney of Tucson. Dr. Dan L. Mahoney was named secretary to the Committee.

It was voted to include nine local and seven guest speakers for the meeting, including a representative from the American Medical Association to address the House of Delegates in open session. It was also voted to continue the Scientific Breakfasts and Round-Table luncheons which have proved popular with the membership.

Guest speakers to be invited will include specialists in Pediatrics; OALR; Gynecology; Internal Medicine; and Surgery. The Pediatrician will be supplied through the Division of Maternal and Child Health of the State Department of Health, the Association Committee on Maternal and Child Health making the selection of the speaker. While the guest speakers were tentatively selected, their names may not be revealed until acceptances have been received.

Local papers will be solicited from the county medical societies, the committee to make selection of speakers from the topics submitted for choice. It is desired that there be a state-wide representation of local papers. Dr. W. L. Minear of the Committee was placed in charge of this phase of the program and will dispatch letters to the county societies at an early date relative to submission of papers for selection by the Committee.

An innovation for the Program will be a symposium of three papers by local speakers with the concluding paper or discussion to be by a guest speaker. The subject for the symposium will be announced later when guest speakers are secured.

The Committee will convene again early in the fall when replies from guest speakers and the county medical societies have been received.

? QUESTIONS ?

Just to see whether the idea will catch on and hit the spot, professionally speaking, we are printing here three questions on which to sharpen your wits and furnish the readers some interesting diversion and good advice. If the questions do "catch", we shall repeat the idea now and then. The September issue will publish the best three answers to the questions asked here signed with your name, initials, nome-de-plume, or unsigned as you wish. By the way, a good question or two will be in order as well as replies to the questions. So, either questions or answers, your participation will be welcomed.

QUESTION 1—How much should the physician tell the patient as to his true condition? (Give us a gem of medical thought here in 25 words.)

QUESTION 2—What role should the physician's wife play in relation to his medical practice or through the Auxiliary? (Would your wife like to reply to this? Okay, if she can make it in 50 words.)

QUESTION 3—What is the most humorous experience in your medical practice? (And, doctor, I DO mean humorous.)

PROFESSIONAL NEWS

The Apache County Medical Society has selected the following list of officers for the current year: President, Dr. T. J. Bouldin, St. Johns; Vice-President, Dr. Kenneth Herbst, McNary; Secy.-Treas., Dr. G. C. Lewis, St. Johns. Dr. William F. Orlando, graduate in medicine from the University of Southern California, 1936, has located at Springerville and has been inducted to membership in the same Society.

Dr. Hilton J. McKeown of Phoenix, while in attendance at the Annual Session of the American Medical Association at St. Louis was certified by the American Board of Internal Medicine.

Dr. Jack Hild of Douglas, a member of the Cochise County Medical Society, is now in the East for a year's graduate work in Pediatrics.

Dr. Normal D. Hall, Phoenix, Arizona, was the guest speaker of the June meeting of the Los Angeles Cancer Society. Dr. Hall spoke on "Carcinoma of the Cervix in the First Three Decades of Life", giving statistics on fifty-seven cases proven by microscopic examination.

VENEREAL DISEASE CONTROL

DR. THOMAS BATE, Phoenix, Ariz.
Venereal Dept., Maricopa County Health Unit.

Realizing that a serious menace to the public health of the community existed in the form of untreated venereal disease among the indigents in

this area, the Maricopa County Health Unit organized the venereal control unit on October 19, 1937. The aims of this clinic are, to control the spread of infection of venereal disease, and to stop the advance of the disease when the period of infectiousness has passed.

The clinic is housed in the County building, located at Twelfth and Van Buren streets. The personnel consists of two physicians, two registered nurses and a clerk. The clinic is open four nights a week, from Tuesday through Friday.

The patients are all indigents and originate from several sources. They are admitted to the venereal clinic from the various branches of the county services, from the W. P. A. agencies, and from the city services such as the food handlers. Many of them are sent to the clinic from the local physicians. In this area there are a great many migratory agriculture workers. These people are not cared for by their agencies, but are sent to the venereal clinic. A few of the patients have come to the clinic by themselves requesting diagnostic procedures or therapy.

All types of venereal disease are treated at the clinic. Since the organization of the clinic up to January first, 1939, 1000 cases of syphilis were seen and treated. Of this number 191 were classed as acutely infectious. That is, they either had the the open primary lesion or showed infectious secondary lesions, 803 of the syphilitic patients were classed as latent or non-infective syphilis. Contrary to popular opinion, this clinic, encountered far less gonorrhea than syphilis. Between October, 1937, and January, 1939, 375 patients were treated for gonorrhea. It might be said here, that there were a few more actual cases encountered, but they were reinfections in patients who had been treated previously at this clinic. In the course of the treatment 10 cases of vulvovaginitis of gonorrheal origin in young females were encountered. During the fifteen months of operation only two chancroids and no cases of granuloma inguinale were encountered. A great many cases were referred to the clinic for treatment with an admitting diagnosis of chancroid and granuloma inguinale. In the course of the examination which consists of routine blood serological examination, darkfield examination on open lesion and the various antigenic skin tests when indicated, it was found that the bulk of the cases were primary chancres. As a result of observations it is rather a standing rule that any lesion of the mucous membranes and adjacent parts is a syphilitic lesion until definitely proven otherwise.

In the treatment of the cases of syphilis, the Maricopa County venereal clinic holds to the standard of heavy metals and the use of neoarsphenamine. The treatment of infectious cases is a little different here than that employed at other clinics. Knowing that a great many of the cases are migratory and many of them not too cooperative, a scheme has been devised of attempting to render them non-infectious as soon as possible, the acute cases are given 10 bi-weekly injections of neoarsphenamine, then one weekly injection alternating with one weekly injection of bismuth subsalicylate until the patient has had fifteen injections of neoarsphenamine in the space of 10 weeks. The patient then has five bi-weekly injections of bismuth and then starts his second course of neo. This is a large amount of neoarsphenamine, but we have seen only two cases of arsenical dermatitis and both of these were in patients with latent syphilis and had had arsenical reactions in the past. From the recent work being carried out in New York and in Detroit it would seem to point that the cure for syphilis lies in early massive doses. Reports from both of these places have shown encouraging results with the use of continuous drip, massive doses of neoarsphenamine.

The patients who are classed as latent syphilitics receive the routine as suggested by Stokes, O'Leary and other authorities which consists of alternating courses of an arsenical and a heavy metal with rest periods spaced according to the age and condition of the patient.

The treatment of gonorrhea at this clinic consists of the use of adequate dosages of sulphanilamide and the classical rainbow treatment of uretheral irrigations. It has been found necessary to change the color of the irrigating substance in order to keep the patient's cooperation. It is rather interesting to note the scarcity of complications of gonorrhea that have been encountered.

Gonorrheal vulvovaginitis has undergone a few changes in its treatment. Originally potassium permanganate and sulphanilamide were used. Then the estrogenic hormones were added. In the past few months we have failed to see any advantages in the use of the estrogenic substances and had begun to notice some of the undesirable side effects. We no longer use estrogenic hormone in the treatment of vulvovaginitis at the clinic. At the present time we are using an injection of 10% protargol in glycerine, an adequate dose of sulphanilamide until the acute stage is passed. The patient is douched twice daily with a 1 to 5000 solution of permanganate of potash. Results have been more satisfactory with this type of therapy.

We have employed several procedures in attempting to uncover undiagnosed and untreated cases of venereal disease. When the patient presents himself for treatment and diagnosis, he is questioned as to the source of his infection. By the use of a little patience we have been able to learn the source of the infection in practically all the acute cases of venereal disease which we encounter at this clinic. We have found that the cases of syphilis encountered come from three sources. Syphilitic infections arising from professional prostitutes occurred in nearly 10% of the cases. Syphilis coming from an infected marital partner occured in 4% of the cases, whereas syphilis occurring from the "pickup" or

amateur was responsible for 86% of the cases encountered.

New patients are requested to have their immediate contacts examined by the routine physical examination and by the blood serological examination.

Venereal diseases being infectious, and occupying the unique position of being the only contagious set of diseases in which the patient is turned loose upon the community without any quarantine, it becomes quite a problem to enforce treatment upon these patients. For some reason we have been able to gain a very commendable degree of cooperation from the patients encountered at this clinic. Perhaps this is due to the fact that the nature of the disease and the line of treatment is carefully explained, perhaps it is a result of the vigorous campaign which the Public Health Department has waged along the lines of education. Of course there are some patients who will not come for treatment. If they are classed as non-infective, we make no attempt to force them to be treated, but if they are infectious that is a different problem. If a patient is infective and lives in the city, the clinic notifies the police department and the patient usually shows up for treatment. If the patient lives outside the city limits, the district nurse pays them a call. So far the legality of these methods has not been questioned, so we cannot state their true value, but from a practical point of view they have worked admirably for this clinic.

EL PASO
TUMOR CLINIC
REPORTS

Tuesday, May 23, 1939
1:00 p. m.
El Paso City-County Hospital
Dr. Leslie M. Smith, presiding

CASE I

Dr. R. P. Hughes: This child is 11 years old. About a year ago, in April, she had an operation for mastoditis and also an incision on the neck here which was probably an abscess. About three months after the operation she developed this, what is apparently a keloid. As far as the treatment of this case is concerned, when these things are early we do think with radiation is of definite benefit. After they become rather hard and thickened, radiation apparently does not do a good deal of good. The filtered x-ray seems to be better than the unfiltered, and because of the fact that the skin over these keloids is so thin you have to be pretty careful not to give too large a dose. We rather favor the semi-erythema dose of filtered ray. In old keloids it is probably better to radiate first, then excise, and then follow up with radiation, and some men think just radiation following excision is just as good. I don't know which is the better, but sometimes even under the best of circumstances they fail to respond to any type of treatment. In this case I think it would be well to try some radiation, and if it does not respond, go ahead and excise it, and maybe follow up with a little x-ray, as soon as we get the healing started.

Dr. W. W. Waite: What about leaving it alone? It doesn't hurt anything.

Dr. Hughes: Sometimes these things tend to undergo degeneration, and they have a tendency towards epithelioma.

Dr. D. von Briesen: Do you think operation would be better than radiation?

Dr. Hughes That depends upon what tendency she may have toward further keloid formation. It is pretty hard to tell with her. The colored race is more prone to keloid formation. I think probably the best result would be obtained by surgery followed by x-ray, but since this keloiid is only a year old I think it might respond to a great degree to radiation alone.

Dr. John L. Murphy: In the South I have seen lots of them, but I have never seen one undergo malignant degeneration.

Dr. von Briesen: I have seen them become malignant. I believe that excision followed by radiation would offer more in the way of a cosmetic result. I don't believe radiation alone would accomplish a satisfactory cosmetic result in this case.

Dr. Murphy: I don't think that the one on the mastoid bone should be touched with the knife.

Dr. Hughes: I don't think so either, and it is not of such cosmetic importance either, there. What do you think about trying radiation on the one behind the ear, and if a good result is obtained, using radiation on the other one, too?

Dr. Leslie M. Smith: I think it might be a good idea to give the patient some preoperative radiation and then excise it, and then about two weeks later follow it with a smaller dose.

CASE II

Dr. von Briesen: This patient had a sore on his tongue for more than a year, and although it did not get well, he didn't think it was very important. He is a heavy smoker. Recently the sore has been getting larger and very painful, and on Feb. 25 of this year he consulted the clinic and was seen by Drs. Smith and Hughes, who referred him to us for radiation and treatment. At that time there was a large infiltrated lesion at the base of the tongue. It was ulcerated and necrotic in its center. It was rather extensive. From the pathology report, diagnosis on which was "carcinoma," it was thought that it was probably highly malignant. There were glands in the left neck which were not adherent and which moved freely.

Chest film taken on Feb. 25, 1939, showed no evidence of metastasis. There was moderate peribronchial fibrosis and some enlargement of the mediastinum.

Hg	66
Rbc	3,850,000

These reports are not complete. Several of the more interesting discussions are abstracted here.—Ed.

Wbc 13,000
Differential P-66, S-32, L-2

The Kahn test was negative.

He has already received 5,000 Roentgens through three fields, most of it through two fields—a field 15x15 cm. covering the glands, on this side, and another on the other side, which irradiated all the glands of the tongue, and then another 1,000 posteriorly and to the left, making a total of 5,000 delivered in a triple-cross manner to the lesion. The lesion is becoming considerably smaller, and a lot cleaner, and now is ready for further treatment, which we have planned to be Radon, using nine 3-mil. platinum. These are to be inserted on Friday morning. We would appreciate very much any comment or suggestions as to this man's treatment. So far he has responded very nicely. The glands in his neck are small, hard, fibrous nodes now; we don't know whether they contain any active cells or not. He still has no evidence of metastasis in his chest, and his general condition is very much improved. In fact, he is able to work if he can get some work. (Here all present examined the lesion.) It is seven weeks now since his last radiation. Not the least problem that we had with this man, and which you will always have in radiation around the head and neck, was oral hygiene. It is extremely important, and can be accomplished with rather simple but persistent measures of mouth-washing.

Dr. Smith: I think in these adenocarcinomas there is always an argument as to whether treatment should be surgical or radiation.

Dr. Murphy: Biopsies are always indicated, I think. In the early stages it is hard to tell. I favor x-ray treatment over surgery in tumors of the tongue. We had a case one time that was treated surgically and half the tongue had to be removed.

Dr. L. O. Dutton: We have given a good deal of thought to these things recently in our office, and we are gradually inclining to surgical treatment of lesions of the tongue. In the first place, they metastasize slowly. We do not see many of them with demonstrable metastasis even after a number of months' duration. Palpable glands in the neck do not always mean metastasis, because there is much inflammatory reaction down there, and when we take out the glands by surgical operation they are found not to be malignant. Our own results have been better in cases treated early by surgery. A few of them are probably a little better off with a little x-ray treatment first, and then surgery, but some of them, particularly if they are early, are referred to surgery immediately and followed up with x-ray, and this group of cases has done better than those treated with radiation alone. Most of these lesions of the tongue get along very nicely from a surgical angle with a hemisection, leaving at least half of the tongue, which gives you a pretty well functioning tongue. We have been quite disappointed in Radon implantations.

Dr. Cummins: How extensive surgery do you advise?

Dr. Dutton: I don't know, but most of ours have been hemisections, and taking out a few of the salivary glands and lymph glands.

Dr. Smith: In this case I believe it is so far back that you would not be above to use surgery without taking out the whole tongue.

Dr. von Briesen: Treatment would, of course, depend on location. If the lesion is on the anterior two-thirds of the tongue I think you could use surgery.

Dr. Dutton: I recall a recent case where we thought we could get a good biopsy, but we had considerable difficulty in identifying anything that even suggested malignancy in the biopsy, although clinically it was quite typical. So we resected it anyway and it was malignant.

Dr. von Briesen: It is important to maintain good oral hygiene, and it is well worth while to postpone treatment until any bad teeth have been removed. I would like to say something I omitted before—that Wassermann Kahn and Eagle all are negative on this man.

CASE III

Dr. Cummins: I think you all saw this patient at the last clinic; I was not present. This woman is 50 years of age; has had nine children, all nursed on the breast. Negative history as far as lues is concerned, and negative Wassermann. She states her mother had a tumor of the breast which went away of its own accord. She gave a history of hitting the breast about five years ago and the first symptom was itching over the nipple, followed by a crust over the nipple which came off and reformed at intervals for a period of three years, at which time a tumor developed, and she ocnsulted a doctor who prescribed a salve, which did her no good. Since that time she had no treatment except the salve. Dr. Rodarte saw her in April of this year and referred her to the hospital. At the time of admittance she had an area of eczema about the nipple and a tumor of the breast about the siize of a hen's egg. There was dimpling of the skin over the tumor and the nipple was retracted and eroded. There was an old chronic lesion. No nodules in the skin. Axillary nodes were palpable; none in the apex. Skeleton normal. Lungs normal. No evidence of metastasis. I understand that Clinic went over the case and recommended surgery. I came out and examined her, and there were supraclavicular nodules, very evident, though this was not mentioned in the Clinic report. As far as I was concerned, it was an inoperable case. There was a question of perhaps giving her some relief as far as preventing an ulcerating breast, and also the internes had not had a case of this kind before, so a radical mastectomy was done, but no attempt was made to dissect the glands above the clavicle. We had to take off a lot of skin because the tumor mass was adherent to the skin. You can see here that we have some separation of the line of discission. We went clear across the midline and even made a few incisions in the skin, which approximated very readily. I am sure there is no chance of cure; in

the first place, the axillary glands were involved. She probably had a 15% chance to live five years with a radical, but probably not as those glands above the clavicle are enlarged. X-ray of the chest did not show any metastasis, but I am sure you all feel this gland above the clavicle. I understand the Clinic wanted a diagnosis on the skin, but this was not sectioned. Do any of you favor x-ray treatment of the supraclavicular glands?

Dr. Murphy: I think these patients are entitled to removal of the breast and of the glands, not in the hope of cure or even to prolong life, but to avoid the ulcerating, foul-smelling, painful lesions which follow.

Dr. Swope: I would like to cite a recent case that I had referred to me on account of a psychic disturbance. A white woman who had been healthy except for carcinoma of the breast had a "cancer-cure" treatment. The physician in charge noted the importance of the cerebral disturbance and I was called in to see her. There was extensive glandular involvement with swelling of the arm. She died within about two weeks, and it was found that she had a metastasis to the brain. One reason why I recommend the removal of a breast like that is because of the danger of metastasis to the brain.

Dr. R. B. Homan, Jr.: You fellows remember that we had Dr. R. W. McNeally of Northwestern down here last year at Southwestern, and his feeling about cancers of the breast briefly is that practically 100% of them will be dead within five years, no matter what is done. He has quit entirely doing radical removal of the breast. He says it is impossible in the first place to remove all the tissues in the axilla, and that no matter how skillful you are there are no better results from a radical removal than from a simple followed by radiation of the axillary and supraclavicular nodes. He says the operative mortality is greater in radical than in simple, and that the patient is much more comfortable for a longer period of time, and that the end results are no better than in simple mastectomy. He follows all his cases with radiation, but he says they all eventually die of cancer. In Memorial Hospital in New York City they also think that simple mastectomy in some cases is justified. They follow all of them by radiation, and most of them receive preoperative radiation. Dr. Burton Lee, who did nothing but breast work there for a good many years, feels that pre- and post-operative radiation are of definite value, more particularly the latter.

Dr. Cummins: I can say personally that in this case there was no justification for anything more than a simple mastectomy. It was done simply because the internes had never had one. Lee uses preoperative x-ray, but there are just as good men who condemn it.

Dr. Murphy : In one of our cases following mastectomy there was a useless, indurated, swollen arm. Would that be due to radiation or surgery?

Dr. von Briesen: Probably due to radiation.

Dr. Cummins: It was a very common thing before X-ray was used, and was thought to be due to venastasis following removel of the pectoralis major.

Dr. von Briesen: Radiation has a very definite effect on the lymphatics.

COMMUNICATIONS

Sir:

In addition to the articles enumerated in our letter of June 2, the following have been accepted:

Abbott Laboratories
- Sulfanilamide—Abbott, 4 Gm. Ampoules (Crystals)

The Denver Oxygen Co.
- Carbon Dioxide-Oxygen Mixture
- Oxygen-Carbon Dioxide Mixture, Carbon Dioxide 5%; Oxygen 95%
- Oxygen-Carbon Dioxide Mixture, Carbon Dioxide 7%; Oxygen 93%
- Oxygen-Carbon Dioxide Mixture, Carbon Dioxide 10%; Oxygen 90%

Lederle Laboratories, Inc.
- Immune Globulin (Human)—Lederle
- Tablets Ascorbic Acid—Lederle, 0.025 Gm.

Wm. S. Merrell Co.
- Ampuls Caffeine with Sodium Benzoate, 2 c.c.
- Sulfanilamide-Merrell
- Sulfanilamide Tablets, 5 grains
- Sulfanilamide Tablets, 7½ grains

Winthrop Chemical Co., Inc.
- Salyrgan-Theophylline Solution (Winthrop)
- Ampoule Solution Salyrgan-Theophylline, 1 c.c.
- Ampoule Solution Salyrgan-Theophylline, 2 c.c.

Yours sincerely,
Paul Nicholas Leech, Secretary,
Council on Pharmacy and Chemistry.

NEWS

General

The next written examination and review of case histories (Part I) for Group B candidates of the American Board of Obstetrics and Gynecology will be held in various cities of the United States and Canada on Saturday, January 6, 1940, at 2:00 P. M. The Board announces that it will hold only one Group B, Part I, examination this year prior to the final general examination, instead of two as in former years. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held in June, 1940.

Applications for admission to Group B, Part I, examinations must be on file in the Secretary's office not later than October 4, 1939.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting in Atlantic City, N. J. on June 8, 9, 10, and 11, 1940, immediately prior to the annual meeting of the American Medical Association in New York City.

Applications for admission to Group A, Part II examinations must be on file in the Secretary's office not later than March 15, 1940.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I examinations (written paper and case records) and the Part II examinations (pathological and oral).

At the annual meeting of the Board, held in St. Louis on May 12, 1939, it was found necessary, on account of increased administrative expenses, to increase the application and examination fees. Effective May 12, 1939, these are as follows: Application fee $15.00, payable upon submissions of application for review by Board; examination fee $85.00, payable upon notification to candidate of acceptance of the application and assignment to examination. Neither fee is returnable. This increase does not apply to candidates whose applications were filed prior to May 12, 1939.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

Announcement has been made by Dr. C. G. Salsbury, Medical Director of Sage Memorial Hospital, of the Fourth Harlow Brooks Memorial Navajo Clinical Conference, August 28, 29, 30, 1939, to be given at the Sage Memorial Hospital, Ganado, Arizona.

The American Congress on Obstetrics and Gynecology announces a comprehensive program in both the Section on Public Health and the Section on Medicine, from September 11-13, Cleveland, Ohio. Registration fee is $5.00. Complete information and program may be obtained by writing Headquarters Office: The Annex, 650 Rush St., Chicago, Ill. Dr. John Vruwink, Los Angeles, Calif., is Regional Chairman for California, Nevada and Arizona.

El Paso

A regular meeting of the Tumor Clinic was held Tuesday, June 27, 1939, at 1 p. m., at City-County Hospital.

Program: 1.Tumor of arm; 2.Tumor of clavicle; 3. Tumor of breast; 4. Tumor of thyroid; 5. Orbital tumor.

A regular meeting of the Tumor Clinic was held Tuesday, July 11, 1939, at 1 p. m., at City-County Hospital. The program was as follows: Tumor of breast; lipoma of shoulder; angioma; epithelioma of right index finger; tumor of breast.

A special meeting of the Staff of Southwestern General Hospital was held Thursday, July 13, 1939, at the Hospital. Dinner was served. The scientific program which followed was: "Resume of the program of the American Association of Chest Surgeons, California, July 1939", Dr. Felix P. Miller. "Visit to Lahey Clinic, Boston, Mass., and Johns Hopkins Clinic, Baltimore, Md. July, 1939", Dr. J. H. Gambrell.

AUXILIARY NEWS

Bernalillo County

(New Mexico)

The activities this past year were rather limited. The auxiliary members did, however, fill Christmas stockings for the Christina Kent Day Nursery, and they gave $30.00 to the milk fund for under-nourished children. Also Hygeia was supplied to the Public Schools all during the year.

At the May meeting, new officers were elected for the following year as follows:

President—Mrs. M. K. Wylder
Vice-President—Mrs. L. F. Elliott
Secretary—Mrs. Bert Kempers
Treasurer—Mrs. Paul Rice
Coresponding Secretary—Mrs. C. Keith Barnes
Publicity—Mrs. E. E. Royer

Meetings of the auxiliary are not being held during the summer months, but will be resumed in September.

HELENE MYERS,
Corresponding Secretary,
Bernalillo County Medical Auxiliary.

MISCELLANY

STENOSIS OF THE ESOPHAGUS DUE TO LYE BURN, INTENTIONALLY INDUCED

Cicatricial stenosis of the esophagus is a common finding in endoscopic practice. The great majority of patients give a history of having swallowed lye or some similar corrosive substance, accidentally, during infancy or youth. The degree of stenosis varies greatly, depending upon many factors such as the amount of substance swallowed and the nature of the subsequent treatment. In some cases the contraction may be very marked, and the symptoms of dysphagia may be so severe as to call for vigorous, though cautious treatment.

The present instance involves the uncommon experience of being called upon to remove a foreign body from the esophagus of a woman who was fed lye as a child for the express purpose of making her unable to eat as much as other children. On the night of July 24, 1937, the writer was called to

see M. J., aged 74, who had been gagging and choking violently for several hours. She stated that she had eaten cake at dinner and that she had choked upon a piece of nut from the top of the cake. She indicated that the piece was very small, and this immediately raised the suspicion that something might be wrong with the esophagus or the trachea. Inquiry as to the reason why so small a foreign body could cause such an obstruction, and pointed questioning regarding a possible history of the ingestion of lye brought forth the admission that she had swallowed lye when four years of age. It was fortunate that this history was obtained before beginning the endoscopy because it gave warning to proceed with caution.

The trachea, larynx and hypopharynx were negative. Just below the pharyngeal opening of the esophagus, at the cricoid constriction, there was found a mass of scar tissue so great and so dense as to obliterate the lumen of the esophagus completely except for a tiny aperture not more than 3 millimeters in diameter near the anterior wall and somewhat to the left. At this point there seemed to be a small, brown particle which was removed and found to be a tiny piece of nut about 3 millimeters in diameter. No dilator small enough was at hand so dilatation of the stricture was not possible at the time. This patient had purposely been given an ether anesthetic because it was desired to relax any spasm which might be present. The next day she stated that although her pharynx was a little uncomfortable, she was able to swallow better than she had been for several months. Evidently the obstructing particle had been removed and the spasm was relaxed.

The patient stated that when she was a few months old, her father, who had been the captain of a sailing vessel, was drowned at sea. A short time later her mother also died and she was adopted by a family in which there were already seven children. When she was four years old, an itinerant saleswoman, carrying various household articles, came to their house and suggested to her foster-mother that she put some lye into the child's food in order to produce a stricture in the food passage so that the child would not eat so much. This was done. The child suffered for a long time. Finally when the patient was eight years old, that is, four years later, her foster-mother confessed to the little girl what she had done.

It is remarkable to reflect that this patient was able to live 70 years with an esophagus which was so constricted. Even if we assume that the stricture became much more marked during her later years, still it is certain that the stenosis was marked from the beginning. Her ability to exist with such an obstruction is explained only by the fact that she always chewed her food so thoroughly that it was practically in a fluid state when it passed through the constriction. When seen by the writer she was very emaciated, and although she recovered from the esophagoscopy without any trouble, the long-standing emaciation, weakness, and exhaustion, combined with a variety of other conditions (extreme anemia, etc.) caused her to become so weak that several weeks later she died.

She had been married some 50 years, and had borne three children. Two of these are still living and state that she had always been an active woman.—Journal-Lancet.

PELLAGRA

1. Nicotinic acid has been proven to be a specific for the skin, mucous membrane and mental symptoms of pellagra.

2. The exact mechanism of the action of the drug is not yet fully understood. There is evidently some endogenous substance contained in the stomach that must be present before the acid can be effective in correcting the disease.

3. The dose is variable. But 500 mgs. orally or 200 mgs. intravenously daily has been found to be adequate.

4. It cannot take the place of an adequate diet. In this connection I would like to take exception to a plan of prevention I have heard mentioned once or twice. It has been said that the disease might be prevented by issuing to charity cases and people of very low income a supply of nicotinic acid to be taken regularly. To me this appears absurd, because pellagra is not due to the deficiency of nicotinic acid alone. If the disease is to be prevented it is going to have to come from the education of the public to the fact that it only appears where there is a prolonged dietary deficiency. After the development of the disease the drug is strongly indicated and will bring about a cure much more quickly than any form of treatment formerly used although it can hardly be called the ideal method of prevention.

5. To remain free from symptoms after an apparent cure the diet must be watched and an adequate intake assured.

6. Pellagra is a disease of what we do not eat. Until the public is educated to this fact we will have to continue to treat it.—Jo. Ark. Med. Soc.

ALCOHOL AND ROAD ACCIDENTS

It seems self evident that all sane persons, regardless of their personal views on the use of liquor, should be greatly interested in making our highways much safer than they now are for themselves, the members of their family and the public generally. If drunken driving can be stopped or materially lessened it will increase highway safety. Anything that will assist in effective prosecution of drunken drivers is a move in the right direction. There is every indication that the use of blood and urine tests for alcohol is extremely useful in drunken driving cases. This evidence has been received in the courts of this state only during the past two years; but that has been time enough to demonstrate the wisdom of using this evidence. No technical rules of law should long stand in the way of its admissibility. I believe the evidence is proper

and legitimate under the law as it now exists. I believe the Supreme Court of our state will so hold. If courts hold otherwise and exclude this important blood test evidence, legislation should promptly be sought to remedy such a situation to the end that courts and juries may have the benefit of this evidence.—J. Iowa St. Med. Soc.

WHY PEOPLE GO TO CULTISTS

How does this conflict between rational, scientific thinking and primitive, magical thinking affect the situation of choice of cult or physician by a sick person who wants to get well? Every sick or ailing person becomes more childish and tends to rely more on his supposedly forsaken magical beliefs and wishes the more sick he becomes. As a child he felt that his parents were omnipotent. He sought love and security and a feeling of well-being from them. Perhaps they even increased his belief in their magical omnipotence by telling him they would kiss his wound and it wouldn't hurt any more, or by providing the reassurance of their caresses and embraces which made him feel better when he was in pain, even though the pain was not actually lessened thereby. If they couldn't institute measures to relieve him they assured him that the doctor they called in would make him feel better; and they had great difficulty in getting him to understand and accept the idea that the doctor might have to hurt him or carry out some frightening procedure to make him feel better. And so, as an adult, when he becomes ill, he experiences a revival of these childish beliefs in magic or of childish fears in the face of which his adult, mature thinking may be temporarily abandoned. He is ripe for the promise of cure of a special patent medicine or of a cultist who speaks reassuringly and authoritatively. Since a considerable proportion of the population remains at the level of ignorant, childish, magical thinking, it is not difficult to see that there will be an enormous response to magical medicines, magical procedures and convincingly spoken reassurances of cure.—Jo. Kansas Med. Soc.

TUBERCULOSIS AND TONSILS

Sixty-one individuals from whom tuberculous tonsils or adenoids had been removed in the years between 1912 and 1920 were investigated in 1935 at the Johns Hopkins Hospital. Of the 45 who were less than 14 years of age when the operation took place but one had died from tuberculosis and 42 were alive and well. Of 16 cases who were past the age of 14 more than half had suffered from pulmonary tuberculosis of the adult type. Incomplete examinations at the time of operation made it impossible to determine in how many cases the disease was already present in this older group. What did seem apparent was that after removal of the tuberculous focus, the children under 14 rarely showed progressive tuberculosis of the adult type. —Bull. Johns Hopkins Hosp.

SULFANILAMIDE THERAPY IN MASTOIDITIS.

(Continued from page 265)

in perfectly with the clinical picture of three of the patients who had had the drug and had ultimately required the advantages of surgery. I have purposely selected these three because their mental make-up lacked any and all of those qualities associated with the stoic. Their reaction to pain of any sort was of an extreme nature and not one of them had any logical reason to hide any response to stimuli by the mental hazard that if they did show pain they would have to go to surgery. It was amazing to find that the cortex in one instance was erroded and in the other two extremely thin. The mastoid areas were filled with pus under such pressure that as soon as an escape was afforded the pus welled up into the wound. Yet these patients had elicited no signs of discomforture, let alone pain when within the hour firm pressure had been exerted over these self same areas.

The pathology as found at the time of operation is of interest. In all cases it seemed as though there was definite effort on the part of the host to bring about repair. In each case there was abundant very firm granulation tissue, a varying amount of frank pus and areas of good looking bone and relatively normal appearing cells interspersed in or closely adjacent to markedly necrotic areas. The picture was not characteristic of that usually found in the average coalescent mastoid infection of 4 to 8 weeks' duration. In all instances the cultures were positive for the hemolytic streptococcus.

Time does not permit one to suggest discussing other interesting clinical phases such as the relatively slow healing following operation. the cases wherein the hemoglobin dropped from 84% to 39% within one week and the peculiar psychic reaction sustained by some of the patients following even very small doses of the drug. Nor is it of any point to attempt to discuss the various theories as to how the drug acts or what milligrams per cent should be maintained or why it should render such excellent results in meningitis of otitic origin and apparently be of such little aid in combating pathology in the mastoid cavity. I do wish to leave the thought that sulfanilamide can and does mask at least part of the clinical picture of mastoiditis.

490 Post Street.

BOOK NOTES

THE BACTERIOLOGY OF TYPHOID, SALMONELLA, AND DYSENTERY INFECTIONS AND CARRIER STATES: Leon C. Havens, M. D., Director of Laboratories, Alabama Department of Public Health. Edited by Kenneth F. Maxcy, M. D. Foreword by Wilson G. Smillie, M. D., New York. The Commonwealth Fund. London: Humphrey Milford, Oxford University Press. 1935.

This is a small volume of 158 pages packed with information which every practitioner should know

about and which is known to relatively few. Especially should all laboratory workers have this volume. How to definitely diagnose disease due to typhoid, paratyphoid and other members of the Salmonella group and dysentery bacilli is here told in detail. The author makes the following significant statement: "The day has passed when agglutination tests with the patient's serum can be accepted as diagnostic evidence. The extent to which clinicians still rely upon these simple procedures is regrettable". I have had experiences which make me realize that there is much extremely important and suggestive information within these covers—to laboratorians as well as to clinicians.—O. H. B.

HEALTH OFFICERS' MANUAL: By J. C. Geiger, M. D., Dr. P. H., Sc. D., LL. D., Director, Department of Public Health, City and County of San Francisco, California. 148 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1938. Cloth, $1.50 net.

Dr. Geiger, director of the Department of Public Health of the City and County of San Francisco, California, presents a very excellent, small, and concise manual on general information regarding administrative and technical problems of a health officer. It is well divided into chapters. The organization is well stressed.

The duties of the health officer not only in relationship to his office and actual statistics and records, but also in relationship to the community and in the prevention of endemic and epidemic diseases, is very nicely, but briefly, considered.

There is an excellent group of diagrams and charts showing the Epidemiology of such infections as Brucella, Plague, Leptospirosis, Relapsing Fever, Rickettsia, and Psittacosis. These diagrams and charts are among the most interesting part of the book, because they present in such a concise form the outstanding features of these various infections.

In the final chapter on Inspection and Control, his interpretation of laboratory reports is an excellent criterion of good common sense where the sanitation of an establishment by inspection is worth all the laboratory work in the world.

In all it is a book that the young health officer would not likely want to be without and that even physicians and medical officers on duty will find of much value.—J. M. R.

A TEXTBOOK OF SURGERY: By AMERICAN AUTHORS. Edited by Frederick Christopher, B. S., M D., F.A.C.S., Associate Professor of Surgery at Northwestern University Medical School; Chief Surgeon, Evanston (Illinois) Hospital. Second edition, revised. 1695 pages with 1381 illustrations on 752 figures. Philadelphia and London: W. B. Saunders Company. 1939. Cloth, $10.00 net.

Since publication of the first edition in 1936, Christopher's Textbook of Surgery has been recognized as unexcelled in the one-volume class. This second edition, revised to include latest ideas in surgical treatment, maintains that reputation. With a list of 185 eminent contributors, the 1650-page

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volume is a compilation of surgical teaching by recognized leaders in various branches of surgery.

Divided into 40 chapters, it begins with Inflammation and Bacteriology, ends with Pre-operative and Post-operative Care. The chapter on Wounds presents interesting reading for any surgeon. Emphasis on cleansing of traumatic wounds as opposed to the popular treatment with antiseptics, is noteworthy.

The Endocrine System is allotted only 34 pages, but included is a thorough discussion of diseases of the thyroid gland. In 177 pages the principles of treatment of fractures are well presented, but treatment of specific fractures is considered hardly in sufficient detail for the surgeon who treats fractures.

The Breast receives 51 pages, concise and well-illustrated. Gynecology is treated in 72 pages, surprisingly comprehensive in presenting common ailments of the female generative organs. The chapter on Appendicitis should be memorized by every medical student, reread every year by every practicing physician and every surgeon.

The second edition includes a new chapter on Cancer of the Lip and Tongue. Also new are sections on congenital obstruction of the bile ducts, duplication of the alimentary tract, tetanus (with conservative opinion as to active immunization), lymphogranuloma inguinale, and some ano-rectal diseases. The various uses of sulfanilamide are discussed by twelve authors. Protruded and injured intervertebral disks are described. Among the newer operations mentioned are excision of the fractured patella, the Whipple operation for carcinoma of the head of the pancreas, and the Henry midline extraperitoneal technique for femoral hernia.

New observations are included on the surgical treatment of actimomycosis, transportation of the patient with a spinal injury, surgical treatment of ulcerative colitis, the value of vitamin K to the jaundiced patient, the significance of urinary prolan in cases of testicular tumor, and the use of mandelic acid as a urinary antiseptic.

As expressed in the preface to the first edition, this textbook was designed "to give the student a concise presentation of surgery which is characterized by the maximum authority." This it has accomplished. For ready reference as to diagnosis and latest accepted treatment, the book will prove exceedingly valuable to the general surgeon.—J.L.G.

CANNED FOOD REFERENCE MANUAL. American Can Company. N. Y. Pp. 242. Illustrations 41. Fabrikoid. 1939.

This small volume is published for the information of the medical profession. It contains chapters on Food Canning Technology, Public Health Aspects of Canned Foods, Canned Foods in Nutrition, and Useful Facts About Commercially Canned Food. There is a valuable section on The New Federal Food, Drug and Cosmetic Act.

The interesting statement is made that "Available records show that no case of proven botulism

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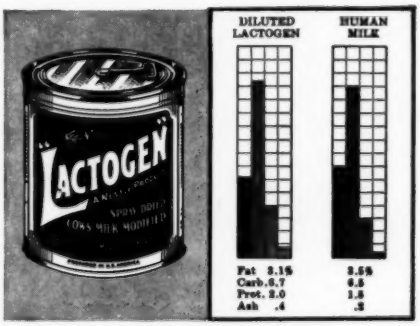

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attributable to a domestic commercially canned food has occurred in America since 1925." One recalls in this connection the unfortunate outbreak of botulism from home canned foods that occurred in New Mexico last year.

This book is crammed with interesting facts regarding foods, including tables of caloric values and rather complete lists of the various vitamine containing foods. Hundreds of citations throughout the book testify to the careful labor involved in its preparation. The manual will be sent any physician gratis upon application to the American Can Company. It is a worthwhile piece of work and is heartily recommended.—M. P. S.

MEDICOLEGAL PHASES OF OCCUPATIONAL DISEASES: By C. O. Sappington, M. D., Dr. P. H. An Outline of Theory and Practice—presenting, in handbook form, the Industrial, Insurance, Medical, and Legal inter-relations of all the elements of Occupational Diseases, from Origins and Causes, to Disabilities and Costs. 400 pages; 5¾ x 7¾; bound in cloth (or semi-flexible, as preferred). Price $2.75 (cloth). Published, 1939, by Industrial Health Book Company, 540 North Michigan Ave., Chicago, Illinois.

There are four principal divisions of the content of this book. viz.: Industrial, Insurance, Medical, and Legal. The necessity of cooperation between the business executive, the insurance carrier, the industrial physician and the lawyer is well exemplified in the text. There are abstracts of state laws and legal decisions as well as suggestions from the American Bar Association and the American Health Association. There are a number of well chosen tables which aid in understanding points as they are made.

There is more and more industrial work being done by physicians today. The complexities of this type of practice are such that some sort of guide is necessary in the intelligent handling of industrial medicine problems. This book may well be considered an excellent guide.—M. P. S.

PROBLEMS IN PRISON PSYCHIATRY. J. G. Wilson, M. D., Senior Surgeon (Retired) United States Public Health Service Director, Division of Hospitals and Mental Hygiene, Department of Welfare of the State of Kentucky; and M. J. Pescor, M. D., Clinical Director, United States Public Health Service Hospital, Fort Worth, Texas. Pp. 275, including appendix. Fabrikoid. $3.00. The Caxton Printers., Ltd., Caldwell, Idaho. 1939.

In but few locations does the whack of the keeper's billy and the crack of the warden's cat-o'-nine yet disturb the public peace. Residents of modern hoose-gows are now more likely to be treated as guests of a benevolent State rather than as wards of the Devil. Sometimes the loving care lavished upon the public's undesirables leads to strange and wondrous machinations. Just a short piece past the lads of a modern state pen rose up in grievous wrath in protest over the edict that pink silk undies were taboo for them. Sad days, when the monstrous meanness of the keepers must forbid such necessities to a poor devil yearning for life's goodies! The writer is aware of the possible retort here—that "anything can happen in Kansas"—but that amusing aberration aside, there still lives the idea among many men that too damned much coddling is flourishing in prisons as a whole! It is not at all difficult to agree, however, that there should be a better segregation procedure of housing the various

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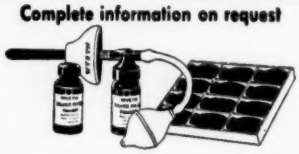

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☐ Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245—"Pharmacology of Inflammation: III. Influence of Hygroscopic Agents on Irritation From Cigarette Smoke."

☐ N. Y. State Jour. Med. 1935, 35-No. 11,590—"Irritating Properties of Cigarette Smoke as Influenced by Hygroscopic Agents."

☐ Laryngoscope, 1935, XLV, No. 2, 149-154—"Some Clinical Observations on the Influence of Certain Hygroscopic Agents in Cigarettes."

☐ Laryngoscope, 1937, XLVII, 58-60—"Further Clinical Observations on the Influence of Hygroscopic Agents in Cigarettes."

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types of criminals together according to their classification. With the amazing complexity of modern law it remains remarkable that more of us aren't caught and penned up for varying intervals. So that, but for the prodigious labors of the sainted lawyers, who make all our laws, many convicts are far from being anti-social in a true criminal connotation. Sometimes, in a musing mood, many dally with the notion that apparently the haloed shysters of the land have an aim to incarcerate everyone save themselves. Directly the conviction assumes form that the converse of that state of affairs would of a certainty bring about the true millenium on this restive globe. The by-paths here must, alas, be left for the morrow's exploration, despite the fascinating scents and rustles up-wind.

The book now under surveillance is authored by a pair of physicians who seem to know what they are talking about. It makes devilishly interesting reading, the exposition of some of the problems of latter-day penology and the coping therewith. More good citizens and fewer lawyers ought to spend more hours in the study of what and how to do with society's plagues. This book should, therefore, be read by everyone who can proudly count above ten.—M. P. S.

LIFE AND LETTERS OF DR. WILLIAM BEAUMONT. A New Print. By Jesse S. Meyer, A. B., M. D., Late Associate in Medicine in Washington University, St. Louis. With an Introduction by Sir William Osler, Bt., M. D., F. R. S., Late Regius Professor of Medicine in Oxford University, England. 327 pp., $5.00. The C. V. Mosby Company, St. Louis. 1939.

This book is a highly entertaining account of the adventures of a frontier Army surgeon in the realm of experimenting and thinking. It is remarkable how accident or luck has lead to many enlightening discoveries by mankind. Here, then is the tale of an unusual accident happening during a common brawl and the consequent events dependent upon it. The book was printed before in 1912, with a foreword by Sir William Osler. The present edition reprints this foreword and contains in addition an appraisal of Beaumont's work in the light of present day knowledge. This critique is authored by A. C. Ivy, Professor of Physiology and Pharmacology at Northwestern University. Ivy finds some of the work faulty as compared with that of the latter-day researchers. But attention is called to the primitive equipment at hand during Beaumont's day. Ivy concluded that, "One marvels at the high degree of accuracy of his 51 inferences."

To anyone interested in medical history and the lore of the beginnings, this book should have a deep appeal.—M. P. S.

ORGANIZED PAYMENTS FOR MEDICAL SERVICES. By the Bureau of Medical Economics, American Medical Association. Paper. Pp. 185. Chicago: American Medical Association, 1939.

Many schemes for the organized payment for medical services are described in this publication of the Bureau of Medical Economics of the American Medical Association. Several hundred plans for medical care of the indigent involving governmental support and medical society management are explained.

The number and variety of the plans for medical services—operating and proposed, postpayment and prepayment, service and cash, medical society and other organization sponsored—give proof of the efforts that are being made to supplement the private practice of medicine and indicate a desire to discover, by social experimentation, a solution of local medical problems.

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